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EVALUATION OF SECONDARY SCHOOL PROGRAMS TO PREPARE STUDENTS FOR WAGE EARNING IN OCCUPATIONS RELATED TO HOME ECONOMICS. FINAL REPORT, VOLUME I.

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TWELVE PILOT PROGRAMS FOR TRAINING FOOD SERVICE WORKERS AND CHILD CARE CENTER AIDES FOR ENTRY-LEVEL JOBS WERE STUDIED TO (1) EVALUATE STUDENT PROGRESS TOWARDS SPECIFIC OBJECTIVES RELATED TO KNOWLEDGE, JOB COMPETENCIES, AND WORK ATTITUDES, (2) DETERMINE THE RELATIONSHIP OF STUDENT SUCCESS IN THE COURSE AND ON THE JOB TO STUDENT CHARACTERISTICS, AND (3) PROVIDE BY MEANS OF DESCRIPTIVE DATA, ANSWERS TO QUESTIONS OF GENERAL INTEREST TO OCCUPATIONAL EDUCATION. DESCRIPTIVE RATING SCALES MEASURING OCCUPATIONAL SKILLS, A QUESTIONNAIRE MEASURING MOTIVATION FOR ENROLLMENT AND ACHIEVEMENT TESTS WERE ADMINISTERED TO 138 STUDENTS AS PRE- AND POST-TESTS. RATING SCALES FOR THE FOLLOWUP STUDY AND QUESTIONNAIRES TO SECURE GUIDANCE COUNSELOR AND TEACHER INFORMATION WERE ALSO USED. DATA ANALYSES INCLUDED DEVELOPING AN INDEX OF STUDENT SUCCESS AND CORRELATING IT WITH STUDENT CHARACTERISTICS, CORRELATING TEST SCORES FOR A TOTAL SAMPLE WITH SELECTED VARIABLES, AND DETERMINING THE BEST PREDICTORS OF HELPFUL WORK ATTITUDES AND EMPLOYER REQUIREMENTS BY MULTIPLE REGRESSION ANALYSIS OF TWO RATING SCALES. THE VARIABLES MOST OFTEN CONTRIBUTING TO STUDENT SUCCESS IN OCCUPATIONAL EDUCATION WERE SELF-CONFIDENCE, ACADEMIC ABILITY, AND POSITIVE ATTITUDES TOWARD SCHOOL AND TOWARD WORKING WITH OTHERS. A SUCCESSFUL PROGRAM IN HOME ECONOMICS OCCUPATIONAL EDUCATION WAS CHARACTERIZED BY PROVISION OF OUTSIDE WORK EXPERIENCE, CLASSES OF REASONABLE SIZE, POTENTIAL DROPOUTS STAYING IN SCHOOL, STUDENT ACCEPTANCE OF THE COURSE AND THE OCCUPATION FOR WHICH IT TRAINED, A POSITIVE TEACHER, PERSONAL GUIDANCE, AND AN ADVISORY COMMITTEE WHICH INCLUDED OUTSIDE EMPLOYERS. (FP)

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Evaluation Of Secondary School Programs To Prepare Students For Wage Earning In Occupations Related To Home Economics

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Evaluation of Secondary School Programs to Prepare Students for Wage Earning in Occupations Related to Home Economics

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Grant No. OE 5-85-110

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INTRODUCTION

The Problem

Sound general education for all, and rigorous liberal studies for the academically talented, are worthy educational endeavors. However, the responsibility of education does not end here. Occupational education should add the diversity and practicality which our educational system lacks in its effort to educate all young people.

The passage of the Vocational Education Act of 1963 has greatly expanded the task of vocational education in home economics as in the other vocational fields. New areas of training have been added to the traditional concerns of the home economics educator. Home economics may now prepare "...individuals for gainful employment in any knowledge and skills in home economics subjects..."(23)

The findings of the Panel of Consultants on Vocational Education, charged by President Kennedy with reviewing and evaluating vocational legislation, indicated that vocational education programs of the future need to be concerned with such vocational needs of new clientele as:

a. Training programs which provide opportunities to acquire skills, to earn money and to gain experience in and appreciation of the world of work.

b. Learning at an early age the dignity of labor and the pride of workmanship, of special significance to the academically less talented.

c. Obtaining work experience in realistic, up-to-date settings, a situation more apt to be found on the job than in contrived settings of the classroom.

d. Developing attainable goals and occupational aspirations of a constructive nature through direct and personal involvement in a world of work. (8)

Cooperative work-experience programs, which have been established to meet these vital needs of new clientele, are therefore primary concerns of educators responsible for providing training in expanded vocational education offerings.

Background

In 1964 a new secondary school home economics curriculum was readied for use in New York State; in it, occupational education and work experience represented a new program dimension (30).

Sequence I of the employment preparation program is comprised of three elements: (1) a three-unit core of basic home economics; (2) a one unit course, Home Economics 13, Preparation for Employment, which emphasizes the development of specific skills and attitudes toward employment; and (3) related supervised work experience. Sequence II is a two-year program in which the ninth year one-unit course, Home Economics 14, Becoming Employable, emphasizes individual development and the tenth year one-unit course, Home Economics 15, Training for Wage Earning, concentrates on the development of skills needed for entry-level jobs. Related work experience is encouraged as a part of Sequence II but is not required because of limitations set by the age of the students. A third sequence is planned for adults and out-of-school youth.

Some occupations which use home economics knowledge and skills are food service worker, child care center aide, home and institutional health care aide, clothing maintenance specialist or alterer, visiting homemaker, and hotel and motel housekeeping aide.

An experimental course, Home Economics 13, with preparation for entry-level jobs in food service, was initiated at Ithaca Senior High School in 1964 with the cooperation of the State Department of Education, Bureau of Home Economics Education, and the Home Economics Education Department of the New York State College of Home Economics at Cornell University(16). In this project work was directed toward (1) identifying teaching procedures and practices that prove to be effective, (2) developing measuring instruments to assess progress toward knowledge, job competence, and attitude toward job responsibility objectives, and (3) identifying time demands on high school teachers and coordinators for programs of this nature.

Interviews were held with employers in the Ithaca area to obtain ideas regarding job competences needed for entry-level food service occupations, employability characteristics, and the evaluation of workers on the job. Large numbers of boys and girls from other vocational education classes augmented the number enrolled in the pilot course being studied to provide the kind of sample necessary in developing measuring instruments.

Evaluation of the Ithaca program served as a pilot study for the present research. Instruments developed for the Ithaca study were refined; others were developed to serve the expanded objectives of the present study.

Review of Related Research

The need for further research in the wide fields of both home economics occupational education and the orientation of young people toward work is obvious from the very dearth of studies in these areas. Studies related to home economics occupational education are particularly hard to come by. The Ithaca pilot program (16) set useful guidelines for the present research in spite of the limitations imposed by the small sample. A study by Kupsinel (18) provided valuable insight into employer requirements for food service workers and curriculum suggestions by a distinguished panel of educators, dieticians and restaurateurs. Crites (5) and Super and Overstreet(28) endeavored to identify and measure steps in vocational maturation.

There is a great deal of information in the literature regarding employees' attitudes toward work after they are on the job, but little with reference to the attitudes of young people toward employment before they have become full time workers.

Menninger wrote of the

> ...obvious, conscious, psychological reasons for work--the necessity for self-preservation, the desire to raise a family and to be able to support that family, the satisfaction of pleasant relationships with associates on the job.
>
> One of the ultimate results of the maturing process is the ability to work consistently, with satisfaction to oneself and to others (20).

He also stated that attitudes toward work vary depending upon one's experience in growing up and depend, too, "...in no small way on the special training and the education that goes on in school, through college, even into graduate experience" (20). The individual who never received help in assuming responsibility as a child reflects one attitude toward work; an individual may fail to work or to work well as one way of expressing defiance if the type of authoritarian figure who first let him work or forced or tried to force him to work, inspired hostility.

Work is viewed variously by different professions with the economist seeing work as a way of winning economic independence, the theologian regarding work as an obligation which develops responsibility, the sociologist viewing work as a means of relating to the family and the community, and the psychiatrist finding work an essential activity of a mentally healthy person, a mature person.

The all-pervasive influence of attitudes on work performance is further delineated by Super's Self Concept Theory of Career Development (27). The theory sees this self concept formation as a lifelong process in which the phases begin with exploration and continue through self-differentiation, role-playing, and reality-testing in play, in school activities, and in part-time employment. Finally, self concepts are translated into occupational terms through, perhaps, identification with an adult, chance experience in a role that seems suitable, and awareness that one has attributes said to lend themselves to certain occupations or training.

The 105 boys in the Super and Overstreet study (28) were in the ninth grade of high school in New York State when the study began. Super and Overstreet postulated that vocational maturity is a predictor of vocational adjustment since the more highly developed the vocational behavior, the more effective that behavior will be. They saw appropriate vocational behavior in terms of developmental tasks.

> A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks (13).

The Career Pattern Study sought to observe and describe vocational behavior and, also, to assess such behavior from the related frames of reference: vocational maturity and vocational adjustment.

Super and Overstreet found a number of characteristics associated with their measures of vocational maturity in the ninth grade, among which were intelligence, parental occupational level, school achievement as measured by grades, and type of school curriculum.. In New York State college-bound students are usually enrolled in Regents courses while terminal students usually follow the less demanding non-Regents curriculum.

> School curriculum and cultural stimulation in the home were...rather consistently related to vocational maturity. The boys who were in Regents sections of required courses tended, significantly although not to a high degree, to be more oriented to choice than other boys; they were more concerned with choice, better informed, and more planful. The same was true of boys from homes which provided more stimuli to intellectual and general cultural growth, and these boys also tended to be more accepting of responsibility for making choices and plans (28).

The study found vocational interests and attitudes toward work unrelated to vocational maturity in grade nine, although "...these indices may be important in other respects, may prove to predict success, or may become significant at later stages of development..." (28). Other unrelated variables were found to be age within one school grade, parental educational level, birth order in family, parental or social mobility, religious affiliation, urban rather than rural residence, and social adjustment. Super and Overstreet concluded that vocational maturity in the ninth grade should be defined as behavior in preparation for vocational choice, as planning and looking ahead rather than as "...goal attainment, as the having of consistent, realistic, preferences,...as having begun to make a place for oneself in the world of work"(28).

Crites also viewed vocational choice as a "long term developmental process" and wrote

> ...within a developmental conceptual framework, vocational choice is not a single, isolated act of the individual: it is a comprehensive, multifaceted, ongoing process which encompasses many interrelated behaviors of the individual at various points in his prework life(5).

Crites' study had a twofold problem: the construction of a scale to measure the maturity of vocational attitudes and the development of new methods for assessing "developmental phenomena." He wrote that the measure of either vocational maturity or vocational self concept depends upon clearly-defined behaviors. Further, if the two concepts do fit within a developmental framework, they must be related to age.

In Crites' Vocational Development Inventory are two measures of vocational maturity: an attitude test and a competence test. The competence test measures ability to plan steps toward vocational goals, ability to resolve conflicts among the factors in vocational choice, occupational information, and self-knowledge of vocational capabilities. The attitude test has as its dimensions,

Involvement in the choice process
Orientation toward work
Independence in decision-making
Preference for vocational choice factors
Conceptions of the choice process (5)

Students in the lower grades tended to accept statements in the attitude test and high school students to reject them. Since only eight are positive statements and all others are negative, vocational maturity was seen to increase with grade level, with the exception of the atypical eleventh grade. Stages of maturation tended to be discernible at the points where elementary students entered junior high and between junior high and high school.

Kupsinel (18) hypothesized that informed persons would recommend for inclusion in high school vocational courses for food service trainees the following areas: cookery principles, sanitation, nutrition, safety, management, serving food, and personal qualities. She also theorized that persons with high school food service training would be hired in preference to persons of equal experience without such training, that they would be started at higher salaries than those without training, and that the trainees themselves would consider such training valuable in securing and keeping jobs in food service. She used open-end questionnaires to survey schools offering food service courses, their instructors, employers of the food service trainees, and the trainees themselves.

The 33 employers who responded were more supportive of programs training general kitchen workers, waitress or waitresses, and dishwashers than of programs training cafeteria workers, head cooks, salad cooks and bakers. The employers indicated that high school training in itself was not enough; they wanted employees with high school food service training who were also able to get along with others, made a nice appearance, and were trainable. Just half the employers were willing to start trainees at higher pay than untrained workers. It was notable that the employers in this sample showed so much interest in entry-level jobs and in employability characteristics even though the courses themselves provided training for more sophisticated jobs. The viewpoint of these employers reinforced the conviction of New York State home economics educators that courses in preparation for employment in entry-level jobs in food service are appropriate.

Responses of 48 former students who were employed in food service were biased since the sample was obtained by asking each instructor to list two possible employees to be contacted. This typical employee had been working less than five years as a cook, but not head cook; was still using materials from his course; and thought his training helped him get his job, become more efficient, and enjoy his job more. He was highly motivated and proud of his job.

Findings were assembled into a study guide outline which was submitted to a panel of judges made up of state home economics supervisors and representatives of such organizations as the American Dietetic Association, the American Restaurant Association, and the American Hotel Association, for comment and suggestions. The panel accepted the seven areas listed above for inclusion in a high school food service course but also recommended orientation for work, coverage of the supervisors' responsibilities, employees' responsibilities to the supervisors, and care and use of equipment. They emphasized the importance of personal qualities: the ability to get along with people, public relations, and good work habits and attitudes.

A study of relationships between selected student characteristics and educational-vocational success of students attending trade, technical and business schools by Livers (19) concluded that grade point average and rank in class are the most consistent single predictors of performance in vocational training courses. Academic factors, in general, were found to be more closely related to success in the specialty school than were socioeconomic factors.

Livers also found a slight positive relationship between vocational success and academic grades. Vocational success was measured by an employer rating of the graduate of a business, trade or technical school after six months' experience on the job. The scale used by the employer had five sub-areas: efficiency in use of time and movement, efficiency in use of materials and supplies, proficiency in use of equipment on a given job, ability to get along with coworkers, and ability to accept supervision.

The main purpose of the Ithaca study (16) was to develop evaluation instruments for a pilot program in occupational education and to refine one instrument, an attitudes toward work scale. The pilot class included 14 girls in grades 11 and 12 in a small city high school; 141 girls and boys in other vocational programs in the same city were administered the Attitudes Toward Work scale. The Ithaca study provided tentative answers to some questions of continuing interest to occupational educators; however, only in the instance of findings related to the Attitudes Toward Work scale were samples large enough to permit generalization beyond the immediate pilot class.

An index of student success in the pilot class was developed by ranking the students according to their scores on five instruments: descriptive rating scales measuring personal characteristics, waitress and catering skills; an achievement test; and the Attitude Toward Work scale. The index was compared with ranks of students on such measurable characteristics as motivation for enrollment, IQ, academic ability, total amount of supervised work experience, and socioeconomic status of the chief bread-winner in the family.

A relationship significant at the .01 level was found between the index and IQ; relationships at the .05 level were found between the index and (1) academic rank in class and (2) total hours of supervised work experience. No significant relationship was found between the index and SES or between the index and either subscores or the total score on the motivation questionnaire.

Interview responses of the girls enrolled in Home Economics 13 indicated unanimous approval of the course. The girls mentioned their enjoyment at having such a large part in planning of class activities and enthusiastically endorsed course-related work experience. When the girls were asked whether previous home economics courses could provide better preparation for the food service class they suggested additional work in table setting and service, costing of, and the preparation of restaurant-type grilled foods.

Only one girl said she had felt ready for a job in food service prior to the course; ten girls felt ready for food service jobs after enrollment, three had some reservations, and one found she did not like food service work. Thirteen girls felt competent to handle food service jobs in their later life, if such jobs seemed best for them, with just one giving a qualified answer.

During the course of the interviews one girl revealed that she would probably have dropped out of school except for her interest in Home Economics 13. This girl achieved the highest index score in the class as well as high scores on the variables found significantly related. A motivation questionnaire had pointed out another potential dropout. In addition, two girls had been identified as potential dropouts prior to the course because of past records of truancy and other misbehavior. Both of these girls had improved attendance records; all 14 girls who enrolled in Home Economics 13 completed the course.

Trained observors of the pilot--high school teachers, college supervisors, guidance counselors--felt that the greatest gain shown by the students was the poise, confidence, and pride the girls exhibited. One evidence of confidence was the girls' feeling of competence in food service work expressed in the interviews;

another, their adequate self-rating in skills and general employability characteristics.

All the girls who sought jobs soon after graduation were able to get them, although just one was related to food service. Four of the six juniors in the study had full-time summer jobs, two of them course-related.

A major objective of the study was to determine the relationship, if any, between attitudes toward work held by secondary school students and such variables as age, IQ, SES, past work experience, and academic background. The attitude scale was supplemented with a brief questionnaire which yielded information regarding work experience and age of boys and girls in the larger sample used in the development of the instrument. More detailed data were obtained from school records for 62 girls, who were also asked to indicate their expectations of working during later periods in their lives. All the relevant data were correlated with scores on the attitude scale and with each other. All the relationships reported here were significant at the .01 level.

For the total sample of boys and girls a significant relationship (r = .40) was shown between scores on the attitude scale and work experience when the student had had a combination of two types: jobs they obtained on their own and jobs school authorities had helped them get. No significant relationships were found between attitude scores and age (15-19 years), sex, and any work experience factor taken singly. Of the 155 students in the city-area vocational school who participated in the study, 141 said they had held jobs. Students with higher status jobs tended to be older, had had help from school personnel in obtaining their jobs, and held jobs related to the vocational courses they were taking: auto mechanics, print shop, food service, drafting, retailing, electric shop.

The additional data collected for girls alone showed significant relationships between attitude scale scores and academic achievement as evidenced by three grade averages: the average of all the high school marks achieved to that date, the average of vocational courses alone, and the average of courses which included supervised work experience. The highest correlation (r = .58) was found between attitude scale scores and the mark received for work experience. No significant relationship was shown between scores on the attitude scale and IQ, total units of vocational education, number of units earned for work experience, SES, and expectations of working or not working during various states of the family life cycle.

The Ithaca study served as a pilot program for the present study.

Objectives of the Study

Home economics educators have had little experience with the incorporation of wage earning programs in secondary school home economics. The present project was undertaken to provide information concerning programs in this new dimension of secondary school home economics, which is needed by teachers, administrators, curriculum coordinators, guidance officers and teacher-preparing institutions. The proposed research was guided by the following objectives:

a. To evaluate the progress of students enrolled in courses in home economics directed to wage earning toward specific objectives related to:

   1. knowledge
   2. job competences
   3. attitude toward and interest in job responsibilities and functions

b. To determine the relationship between extent of student progress toward course objectives and student success in obtaining and holding jobs to such student characteristics as:

   1. motivation to enroll
   2. age, IQ, academic ability, and socioeconomic status
   3. personal qualities thought related to employability (including post high school plans)
   4. satisfactions gained from course and from the work defined by the course

c. To help provide, by means of descriptive data, answers to questions raised by secondary schools and teacher-preparing institutions regarding courses in which home economics is related to wage earning:

   1. what are the commonalities in home economics-related wage earning training courses?
   2. what procedures are efficient and what standards reasonable for selection of students?
   3. what are the supporting skills necessary in these home economics related wage-earning occupations?
   4. what instructional materials are useful?

5. what facilities, resources, and financing are needed for teaching and training?
6. what guidance and counseling support is needed?
7. what are the time demands on teachers and/or coordinators?
8. what are the problems schools and teachers meet in setting up and carrying through a wage-earning course?
9. what are the occupational backgrounds of teachers who teach job-related home economics courses?

METHOD

The present study dealt with the evaluation of 12 pilot programs in occupational home economics which had as their focii the training of food service workers for entry-level jobs or of child care center aides. One portion of the study was primarily concerned with the evaluation of the pilot programs and with the refinement and development of instruments to implement the evaluation; a second portion of the study treated the twelve classes as one sample of students enrolled in courses in occupational education and investigated questions of general interest to vocational educators.

Description of the Sample

For several years prior to the present study many schools contacted the New York State Bureau of Home Economics Education requesting information about possible course offerings in occupational education. In a presentation at the National Clinic on Home Economics Education, 1966, Dr. Ostler of the Bureau described the selection of the sample.

> ...a list of interested schools was compiled. It was this list which provided the source for selecting schools to participate in this pilot program. Twelve was the number established as the maximum number of schools to participate and some criteria were developed to serve as a basis for selection. It was necessary that school districts participating agree to take the following action:
>
> .Implement a course in Food Services Occupational Preparation or Child Care Services Occupational Preparation, the two areas in which curriculum materials are developed to the stage of experimentation.
>
> .Cooperate as necessary in the evaluation research project.
>
> .Establish an advisory committee to guide and advise local program development.
>
> .Select as the teacher of the course a home economics teacher who is interested in the concept of occupational education and has had working experience in the occupational field.

- Select as trainees, students who can benefit from the occupational education program proposed; will have reached legal employment age by the end of the school year; and are interested in and possess ability to prepare for occupations in the service area for which training will be offered.

- Provide facilities necessary to achieve program objectives.

- Arrange for work experience in actual employment situations as an integral part of the program.(22)

On this basis eight local school districts and two area occupational education centers were selected to participate in the present study. Nine classes were held in the eight local high schools and three in the two area occupational centers. Of the 12 classes in the total sample seven trained students for jobs in food service, three trained child care center aides, and two were Home Economics 14 classes which provided limited experience in food service.

Information on basic teaching facilities and on such student background factors as IQ, SES, units of credit in home economics, work experience prior to the course, and extent of home responsibilities was assembled. Information about student IQs was eratic for the entire sample of occupational home economics students but provided some idea of basic ability. Student scores of intellectual capacity were categorized into four groups with the first including scores below 75; the second, scores from 75-89; the third, 90-109; and the fourth, scores of 110 and above. Schools participating in the study had used a variety of tests for obtaining IQs, administered at different times, but additional information on intellectual capacity was provided by Stanford achievement tests measuring basic abilities of reading and numerical competence (26). The tests were recommended by a testing specialist as appropriate for the largely terminal high school students who made up the total sample. These were administered by cooperating teachers in each class. Socioeconomic status was determined by assigning the chief breadwinner in the student's family a place on the NORC scale(14).

Food Service Classes

Class One. The food service class conducted at an area occupational center was divided into morning and afternoon sections which met for three class periods each. The course was planned as a two-year sequence with skills emphasized the first year and supervised work experience an important part of the second year. Some material on orientation to work was included at the end of the first year of the food service sequence, the year of the present study, but the greater accent was on skills and knowledges. Many class catering projects contributed to student experience.

The class was taught by a highly skilled dietician who had many years of experience in food service management and had previously taught at a two-year post high school technical institute. New and adequate commercial equipment for teaching professional food service was ingeniously fitted into a small room with plans made for moving the equipment to larger quarters when they become available. Students therefore had ample opportunity for learning the use and care of standard large-quantity equipment. The students' laboratory was located adjacent to a new well-equipped school cafeteria and faculty dining room. Close cooperation with school food service personnel enabled the students to gain additional experience as they contributed to student and faculty menus from time to time. The area occupational center is located within an urban complex of three small cities in central New York. The school draws students from local city schools and from outlying central school districts.

The vocational food service class was composed of twenty members, 17 girls and 3 boys. There were 3 seniors, 11 juniors, and 6 sophomores in the group. Their ages ranged from 15 to 19, with a mean of 16.4 years. Four students in the food service class fell in the top IQ category (110 or above), three in the 90-109 range, and two within 75-89. Scores were not available for three students. The food service class ranked first in reading ability when compared with the total sample of 12 classes and third in numerical competence, with 1 referring to the highest rank and 12 to the lowest. The class was also first when grade point averages were ranked. Overall, this class appeared to be the most academically able of the 12 participating in the study.

Socioeconomic status as measured by NORC (14) ranged from 48-86. Typical jobs held by parents were machinist, carpenter, salesman, or butcher for the men and factory inspector or waitress for the seven mothers who worked, all fulltime. Fourteen of the twenty students lived with both parents, two with their mother only, one lived with another relative, and three students lived in foster homes. Six of the students were regarded as handicapped by their guidance counselors, largely for health and emotional disabilities.

Background study in home economics was not a prerequisite for enrollment in classes in area vocational centers but 14 of the students had at least one-half unit (one semester) in home economics, with the mean a full year's work. Some students had as much as three credits in home economics, taken prior to or concurrent with the food service class.

Twelve of the students had held jobs before the course, mostly babysitting, housecleaning and lawn work.

A typical characteristic of the total sample was the large amount of responsibility carried at home doing house and yard work, preparing meals, and caring for younger children in the family. The students in the food service class worked from 1 to 45 hours a week at home. Nine were paid or given a regular allowance of one to five dollars a week for their efforts; the others were given money as they asked for it. Seven students worked at volunteer activities for church, scouts, Grange, and as Candystripers because they "like helping."

Class Two. Class Two, a Home Economics 14 class, was composed of ten ninth-grade students and one sophomore, with a mean age of 15.18, making them the youngest class in the sample. The course was taught in a Long Island community by an instructor with 13 years of teaching experience and additional experience in social work. The Home Economics 14 curriculum, described in the Introduction, focuses on helping students become employable through an understanding of the working world. The development of specific occupational skills is not accented by the curriculum, although outside work experience is encouraged. Such work experience opportunities are severely limited by labor laws designed to protect young workers. Class Two adhered closely to the prescribed curriculum but offered some opportunities for development of skills in food service within the single period the class met daily. Prior to enrollment in their Home Economics 14 class the girls had had the exploratory courses in home economics which nearly all girls in New York State have in seventh and eighth grade.

This class was the least able, academically, of the total sample. It ranked lowest in both reading ability and grade point average and tenth in numerical competence. Six of the students were considered by their counselors to be handicapped by poor cultural background, health, or by the fact that no English was spoken in the home.

Eight of the girls lived with both parents, two with one parent only, and one with other relatives. The fathers of the girls worked in such jobs as food service, construction, sales or maintenance. The five working mothers were employed in factories, hospitals or dress shops as operators, aides or salespeople.

Eight of the girls had previous work experience as babysitters and one as countergirl in a luncheonette. Ten of the girls helped at home with housework, meal preparation, and child care for 2-24 hours a week. Four girls earned from $1. - 5. a week; others were not regularly paid by their families. None of the girls was active in volunteer work.

Class Three. Home Economics 13 was offered in the high school of a central New York city as a one period class with food service the occupational area. The school was the only one in the study where the teacher carried a full teaching load in addition to the occupational course. The emphasis of the course was mostly on acquiring knowledge about the working world. Work experience opportunities were provided only by the school cafeteria, where students worked for their lunch. The teacher had ten years' experience teaching a variety of home economic courses.

Four girls, all seniors 17 or 18 years old, completed the course. The students were among the less able, academically, of the study. IQs fell below 75 for two of the girls, one fell at 75-89, and one at 90-109. The class ranked eighth in reading ability, twelfth in numerical competence, and eleventh in grade point average. Socioeconomic status of their families ranged from 48-83, according to NORC (14). All four girls lived with both parents. Two of the fathers worked in service jobs; two were in highly skilled technical jobs. Two of the mothers were salesclerks; one was a nurse's aide.

The girls had a stong background of home economics courses, from one and one-half to four units of credit. No handicaps were indicated by their guidance counselors. Two of the girls had previous work experience, as babysitters. All helped with housework at home from one-half hour to 12 hours a week. Two received regular weekly allowances of $5 to 7. One girl worked as a volunteer at "community chores."

Class Four. The Home Economics 13 class taught in the high school of a suburb adjoining New York City met for a sixty minute period daily and trained its 10 girls for jobs in the food service industry. Excellent opportunities for outside work experience were available both because of the urban location and the close cooperation between the teacher and employers. The course of study followed the New York State curriculum guide(30) with its major emphases orientation to work, management at home and on the job, and occupational skills. A teacher who had 22 years' experience teaching home economics taught the course and also served as the girls' guidance counselor. Facilities for teaching the course included a new, well-equipped, class quantity food preparation unit as well as traditional home economics foods laboratories.

Eight of the 10 junior girls in the class were 16 and two were 17 at the time of enrollment, which made the class one of the youngest in the total sample. Eight girls had IQs in the 90-109 range, and two were between 75-89. The class ranked tenth in reading ability for the total sample and ninth in both numerical competence and grade point average. All students were from the immediate urban area. Socioeconomic status ranged from 48-69 (14); jobs held by the family breadwinners, three of whom were women, were typically those of maintenance man or porter for the men, in factories or as domestics for the women. Some families had welfare assistance. Five of the girls lived with both parents; five lived with their mothers only. Five of the mothers worked. Seven of the students were regarded by their counselors as handicapped by health, low ability, poverty, or lack of communicative skills. All students had two units of work in home economics in adiition to credit earned in the occupational home economics course.

Seven of the girls had held jobs prior to the course, mostly as babysitters. Two had done volunteer work for the school or for the Salvation Army. The students spent from 2-15 hours a week doing housework at home, for which four received regular pay or allowances of from $1 - 2.50 per week.

Class Five. Class Five was the only school at the beginning of the study which had previously offered a course in occupational home economics, having served in 1964-65 as a pilot program in Home Economics 13 (16). The class was conducted in a small city high school in cooperation with an area occupational center and met for one period daily. The course of study was the New York State curriculum for Home Economics 13, with supervised work experience planned as a major part of the course. Class catering projects provided additional paid work experience with proceeds used to finance class trips to fine restaurants.

The teacher had 16 years' experience teaching home economics, with special interest in foods classes. Available facilities were a traditionally-equipped home economics foods laboratory and some large quantity equipment in the school cafeteria.

Eight students completed the course, seven of whom were girls. Five were seniors and three were juniors. Their ages ranged from

15-18 with a mean of 16.88. Two of the students had IQs in the 75-89 range; three, 90-109; and one, above 110. They ranked seventh in the total sample in reading ability and sixth in both numerical competence and grade point average. Six of the students lived in the small city and two came from nearby villages. Seven students lived with both parents and one with her mother only, for all of whom SES ranged from 48-69. Typical occupations of the fathers were salesman, manager, or machinist. Six of the mothers worked as restaurant owners, practical nurse, teacher, clerk, or assembler in a factory. One student, according to her counselor, was handicapped by emotional problems.

The students had at least one additional unit in home economics with one student having five. Two of the girls had previous paid work experience as babysitters. One girl had worked for pay as a waitress in her family's restaurant and one boy worked on the family farm. Only one student had done volunteer work, for 4-H. The girls worked from 2-11 hours a week at home, largely preparing meals, for which two received a regular allowance of $1.50-5. per week.

Class Six. Class Six, taught in a suburban high school near New York City, had a unique feature in a well-equipped restaurant operated by Home Economics 13 students for the faculty. Another notable feature was the enthusiastic and active support given by the administration to the occupational home economics class. Wide publicity, distinctive uniforms, and informed guidance counselors contributed to the establishment of the program.

Eight boys and two girls enrolled in the initial class; eight were seniors and two, juniors. The class met for two 45-minute periods daily and followed the New York State curriculum. Work experience was provided in the faculty restaurant after it opened in the spring; work experience outside the school was also encouraged.

The teacher was a trained dietician also qualified to teach home economics. The year of the study was her third year teaching in secondary school; she also had seven years' experience as an administrative and teaching dietician. Traditional home economics foods laboratories were available as well as the commercially-equipped faculty tearoom.

One student was 18 at the time of enrollment in the class, five were 17, and four were 16. Most IQs fell within the 90-109 range with one above 110, one unknown, and one below 75. The class ranked third in the total sample in reading ability, fourth in numerical competence, and ninth in grade point average. The students, all urban in background, came from families having

SES in the 56-76 range. All 10 youngsters lived with both parents; just two of the mothers worked. Their fathers were employed as salesmen and in skilled trades; one of the two women worked as a forelady, another in a cafeteria.

Guidance counselors considered two students handicapped by lack of motivation due to past failures, one by low basic ability, and one by irregular attendance at school. The judgement of the counselors is borne out by the wide difference in rank of the student on the basic abilities of reading and numerical competence and their achievement as measured by grade point average.

Two students had work experience prior to the course, both well-paid jobs, doing office work and assisting an interior-decorator. None of the students was involved in volunteer work. All but one of the students helped with housework at home and several mentioned care of yards and gardens. Hours of work per week varied from one-half hour to twenty. Three received regular pay or allowances for their efforts.

Class Seven. A Home Economics 13 class was offered in a new well-equipped school in a suburb of Buffalo. The class met for a single period daily and closely followed the New York State curriculum. The location near a large city provided good work opportunities. Some class catering projects were undertaken to provide extra experience. Class practice in food service under simulated working conditions proved popular with the 10 girls in the class, eight of whom were seniors and two, juniors. A home economics foods laboratory provided a facility for practice in food preparation and service. A restaurant-type grill was added during the year to provide training in a type of equipment the girls repeatedly used on the job. The teacher had 12 years' experience teaching home economics and also had been a dietician in a small hospital.

The students ranged in age from 16-18, with the mean at 16.8. Some of the most able students in the sample made up the class, which ranked second in numerical competence, third in grade point average, and fourth in reading ability. Seven girls had IQs of 90-109, two fell in the 75-89 category, and one was above 110. The girls all lived in the suburban area and all lived with both parents, whose SES, according to NORC (14), fell within 50-86. Six of the mothers worked, mostly in service jobs in foods, housecleaning, or laundry. Many of the fathers worked at highly skilled jobs in local industrial plants; some, in construction. None of the girls was considered handicapped.

The girls had an excellent background of home economics courses, with the mean falling at 2.9 units of credit. Nine of the girls had previous work experience, largely babysitting and housecleaning. One girl had worked in a food market and another as hatcheck girl. All helped at home with housework, most with meal preparation, and two helped care for younger children. Six received allowances for their 3-20 hours of work a week; others were given money "when needed". Four students were active in volunteer work for Scouts, church, and YWCA.

Class Eight. Class Eight, taught in a senior high school in a Long Island community, was a class in Home Economics 14. Since the class was scheduled for double periods daily the teacher decided to include a good deal of work in food service skills, thus the format of the course closely approximated the classes in Home Economics 13.

The teacher surveyed the community within a 15 mile radius prior to the course to explore employment possibilities for her young students and conclude that entry-level jobs in food service and other home economics-related areas were available. She anticipated, however, that transportation problems in the suburban community and the age of her students would severely limit work experience opportunities and she therefore planned many class catering projects as supplementary supervised work experience for which the girls were paid $1.00 an hour. The instructor had 2 years' experience teaching home economics. A traditional home economics foods laboratory in the new, well-equipped school provided facilities for teaching the course.

Eleven of the 12 girls in the class were sophomores and one was a junior. They were one of the youngest classes in the sample, with a mean age of 15.67. The girls were in the "basic" track, a curriculum designed for less-able students or underachievers. IQs ranged the gamut with one above 110, one below 75, and five each in the two middle categories. The class ranked eleventh in both reading ability and numerical competence and eighth in grade point average.

Eight of the 12 girls lived with both parents, two with mother only, one with another relative, and one in a foster home. Socioeconomic status ratings fell at 39-76 on the NORC scale (14) with fathers working in maintenance, engineering, auto mechanics, merchant marine, and sales. The four working mothers included a hospital housekeeper, secretary, manager of summer cabins, and a cashier.

Seven girls were considered handicapped by their counselors with low ability, poor home situations, and health listed as disabilities. Four of the girls had a full unit of home economics background prior to or concurrent with the occupational course and had one-half unit.

Just four of the girls had paid work experience prior to the course, three as babysitters and one in hairdressing. All of the girls helped with housework at home and some with child care, working from two and one-half to 24 hours a week. Six received regular weekly allowances of from $1. to 16. Two girls were interested in volunteer work, one in a hospital and the other in church work.

Class Nine. The food service class taught in a central New York suburban school concentrated on the orientation to work segment of the New York State prescribed curriculum and had as a distinctive feature the scheduling of student classwork so that the seven girls in the class could hold jobs in the afternoons. The instructor had 13 years' experience teaching home economics at the secondary level. A traditional home economics foods laboratory was used by the class, as well as school cafeteria facilities .

The seven girls who made up the class were seniors with a good deal of home economics background; all had at least two full units and most had three. Five were 17 years old and two were 18. Five had IQs in the 90-109 range; one fell above this range and one, below. The class ranked ninth in the total sample in reading ability, seventh in numerical competence, and second in grade point average. The high rank in grade point average is influenced by the grading system of this school for students in their track. A different system of grading is used by many schools for non-Regents or terminal students. Many of the students in the total sample were similarly graded although others were either Regents students or carrying a mixture of Regents and basic courses.

Six of the students lived with both parents and one with her mother only. The SES range was 48-75. All of the fathers worked in local industries except one who was an auto mechanic and another who was a waiter. One of the five working mothers worked in a shoe factory, two were store clerks, one was a hostess in a restaurant and the other a beauty shop operator. Two of the girls were reported by counselors to be handicapped by emotional problems, one by her appearance. All seven girls had previous work experience: three doing housework or babysitting, three as clerks or cashiers, and one as a nurse's aide. Six of the girls helped with housework and/or meal preparation at home for three and one-half to 16 hours a week. Three girls received regular allowances of $3-5 a week. Just one girl did volunteer work; she was a Candystriper in a hospital.

Child Care Classes

Class Ten. One Long Island high school offered two classes in occupational home economics during the 1965-66 school year: the class in Home Economics 14 already described and a Home Economics 13 class which trained girls for jobs as child care center aides and related jobs. All 11 girls were seniors and were among the oldest in the sample, having a mean age of 17.09. The class met for one period daily and had the same teacher as the Home Economics 14 class. Kindergarten facilities were available for use by the class in addition to a traditionally-equipped home economics department. The girls ranked in the middle of the total sample in academic ability, falling at the fifth level in grade point average, sixth in reading aiility, and eight in numerical competence. Nine girls had IQ scores in the 75-89 range, one in the 90-109 range, and one below 75.

Nine students lived with both parents, two with their father only. Fathers of the girls were employed in construction and transportation. Five mothers worked at such jobs as saleslady, secretary, or practical nurse. Guidance counselors felt one student was handicapped by her cultural background and another by health. The girls had a strong background in home economics, most having at least three units of home economics prior to the course. Few girls had much work experience at the time of enrollment, although one had held a factory job and another had been a dental assistant. The girls worked at home from 3-24 hours weekly helping with child care, housework, and meal preparation, for which five received a regular allowance or pay. Two girls did volunteer work for the community: one taught nursery school at church and another was secretary for the Boy Scouts.

Class Eleven. An area occupational center in central New York offered a class in child care in 1965-66 as well as a class in food service. The child care class also met for three class periods daily, and included participation in a nursery school organized for this purpose enrolling local children. The nursery did not meet for the entire school year; sessions were arranged around the class schedule to provide appropriate learning experiences for the vocational school students. The class had two instructors over the school year. One, who had two years' experience at the junior high level, taught the course one semester; the other teacher, who had four years' experience teaching home economics, finished the year.

The five girls who completed the course, four juniors and one sophomore, averaged 16.6 years of age. They were among the more able students in the total sample, ranking first in numerical competence, second in reading ability, and fourth in grade point average. Three girls had IQs in the 90-109 range; one was above 110 and one fell within 75-90. Socioeconomic status of the chief breadwinner in the family approached the median for the sample. Four girls lived with both parents; one, with other relatives. None of the mothers worked. Guidance counselors did not consider any of the students to be handicapped. Two girls had not had previous instruction in home economics, two had one unit of home economics, and one girl had three units prior to the course. Three girls had worked before the course, babysitting and doing housework. The girls worked from 7-18 hours weekly at home, helping with meal preparation, child care, and general housework for which one girl received regular pay of $5. a month. One girl worked as a volunteer in the community library.

Class Twelve. An area vocational school in southwestern New York included a nursery school for local children as part of its course training child care center aides. The class of four junior girls was among the youngest in the total sample; mean age was 16.25 years. Students were bussed to the area occupational center from their local schools for the half-day session typical of the area vocational school program. The teacher had a master's degree in home economics education and wide professional experience but she had not previously taught home economics at the secondary level.

The vocational school students were of average academic ability for the total sample, with scores for reading ability and numerical competence at the fifth rank and grade point average at the seventh. Socioeconomic status, as measured by the NORC Scale (14) was low. All four girls lived with both parents, with no mothers working at the time of the study. Fathers were employed in farmwork, truck-driving and factories. Several students were considered by guidance counselors to be handicapped by cultural background or academic ability. All students had at least two units of home economics prior to the course; none had previous work experience except babysitting and picking farm crops. Girls worked at home from 3-20 hours weekly helping with general housework, meal preparation and child care. None received a regular allowance for work at home. Three girls were active in volunteer work in a local hospital or church.

Summary

Nine classes held in eight local high schools and three classes in area occupational centers comprised the sample for the study of home economics occupational education. Seven classes trained students for jobs in food service and three trained child care center aides. Two local classes provided younger students with orientation toward work and limited experience in food service. Classes met for one or two periods daily in local schools and for three periods daily in area centers.

Ages in the sample ranged from 14 to 19, with a mean at 16.52 years. Approximately 69% of the sample were 16 and 17 years old, 17% were younger, and 14% older. One hundred girls and 12 boys completed the course including 10 ninth-graders, 18 tenth-graders, 37 students in the eleventh grade, and 47 in the twelfth.

Student IQs were categorized into four ranges, with 9% falling above 110, 45% from 90-109, 34% from 75-89, and 12% below 75. Academic ability, measured by grade point average and the Stanford High School Reading Numerical Competence tests (26), is indicated in Table 1 along with additional information about student background.

When scores on the Stanford achievement test were compared with norms for similar students the lowest scores on the numerical competence test were found to fall at the first percentile rank for eight classes in the total sample and low scores in each of two classes at the second and sixth percentile ranks. Highest scores on numerical competence were no higher than the eighth percentile rank in one class, the sixteenth percentile rank in three classes, and the eighteenth percentile rank in another class. In each of three classes one individual score was as high as the sixty-eighth to seventy-seventh percentile rank; high scores in four cases fell between the percentile ranks of 28-58.

Student scores, when compared with norms for the Stanford High School Reading Test, fell as low as the first or second percentile rank in nine classes in the total sample; low student scores in three classes fell at the eighth, twelfth, and eighteenth percentile ranks. An individual score rose as high as the eighty-sixth in another, although the highest scores more typically fell in percentile ranks of from twenty to twenty-eight. In one class the highest reading score just reached the eleventh percentile rank.

Thirty-eight students, one-third of the total sample, were considered by their counselors to be handicapped by poor physical or emotional health or by cultural background. Students carried

Table 1

Student Background, Pilot Program

School Number	Sex	Grade Range	Age			Grade Point Average		
			Range	Mean	Rank	Range	Mean	Rank
1	3 M 17 F	10 - 12	15 - 19	16.40	8	69.12 - 85.60	76.41	1
2	11 F	9, 10	14 - 17	15.18	12	65.40 - 78.08	67.31	12
3	4 F	12	17, 18	17.50	1	66.53 - 75.19	69.44	11
4	10 F	11	16, 17	16.20	10	68.24 - 77.60	72.88	9
5	1 M 7 F	11, 12	15 - 18	16.88	4	70.16 - 79.92	74.03	6
6	8 M 2 F	11, 12	16 - 18	16.70	6	65.50 - 77.52	71.95	10
7	10 F	11, 12	16 - 18	16.80	5	71.34 - 82.77	75.35	3
8	12 F	10, 11	14 - 18	15.67	11	67.17 - 81.00	73.76	8
9	7 F	12	17, 18	17.29	2	72.79 - 77.97	75.52	2
10	11 F	12	16 - 18	17.09	3	69.73 - 82.45	74.79	5
11	5 F	11, 12	16 - 18	16.60	7	71.38 - 79.50	75.10	4
12	4 F	11	15 - 17	16.25	9	69.93 - 78.05	73.82	7

Table 1 (continued)

	Stanford Achievement Test						Background Units in Home Economics		
	Numerical Competence			Reading Ability					
School Number	Range	Mean	Rank	Range	Mean	Rank	Range	Mean	Rank
1	5 - 32	21.6	3	21 - 50	35.1	1	0 - 3	.87	9
2	6 - 16	11.6	10	12 - 21	15.8	12	0 - 2	.18	11
3	6 - 15	9.5	12	18 - 28	22.5	8	1.5 - 4.0	2.75	4
4	8 - 18	12.7	9	13 - 30	20.6	10	2	2.00	7
5	10 - 28	15.6	6	13 - 33	23.0	7	1 - 5	2.56	5
6	13 - 38	19.8	4	15 - 54	30.0	3	0.0 - 0.5	.05	12
7	9 - 36	22.4	2	16 - 46	28.8	4	1.5 - 5.5	2.90	3
8	7 - 17	11.5	11	8 - 42	20.1	11	0 - 1	.37	10
9	8 - 29	15.1	7	14 - 33	21.4	9	2.0 - 3.5	2.93	2
10	6 - 20	12.8	8	13 - 39	24.6	6	2.5 - 5.0	3.04	1
11	13 - 34	22.8	1	28 - 52	35.0	2	0 - 3	1.00	8
12	9 - 23	19.0	5	25 - 33	28.7	5	2 - 3	2.50	6

considerable responsibility at home, some devoting many hours a week to child care, farmwork, and housework. Twenty-four of the 112 students enjoyed volunteer work in community organizations.

Facilities for the food service classes included traditional home economics department foods laboratories, school cafeteria kitchens, faculty lunchrooms, and new quantity food preparation units set up in the classrooms. The two area occupational centers training child care center aides had facilities for nursery schools, which were held in conjunction with the occupational classes. The local program training girls in child care cooperated with kindergartens in the school system. Most of the instructors had many years of experience teaching home economics at the secondary level.

Few of the students in the total sample earned the minimum wage prior to the course; most students worked at housework and babysitting. Socioeconomic status of the families of students enrolled in the occupational education classes ranged from families on welfare to a few of highly trained professionals.

Collection of Data

Scores from attitude scales, questionnaires, descriptive rating scales, and the achievement test, all administered at the beginning and at the end of the course, served as measurements of course effectiveness. During the pretest data collection students in food service classes were asked to respond to the following instruments:

1) Personal Data Sheet--a questionnaire designed to obtain background information about the students.

2) Attitudes Toward Work scale--a 49-item Likert-type scale of students' attitudes toward the world of work.

3) Student Questionnaire--a composite of questions which supplied information concerning factors thought to be associated with motivation for enrollment in an occupational home economics class.

4) Married Women Working--a questionnaire developed to indicate girls' and boys' attitudes toward women working during the various stages of the family life cycle.

5) Achievement Test: Preparation for Employment in Food Service--a 67-item multiple choice test used to measure students' knowledge and comprehension of concepts of food service and the working world.

Students in child care classes responded to the first four instruments listed above and to an achievement test, Preparation for Employment in Child Care, which shared many common items with the food service achievement test but focused on child care rather than food service concepts. The battery of tests for the child care classes also included an 11-item questionnaire, Reactions to Children of Various Ages, a measure of positive or negative attitudes toward children.

The posttest data collection included readministration of the instruments with the exception of the Personal Data Sheet. At the time of spring testing each student was interviewed by a member of the project staff. Interviews to determine student satisfaction with the course were held in private and lasted about one-half hour each; identitites and specific views of the students were held in confidence.

A series of descriptive rating scales to measure qualities related to employability and a series of scales to rate specific occupational skills, either child care or food service, were administered early in the course and again at the end of the year's instruction. A teacher rating and a student self-rating were required at each administration. Additional information about student selection and background was assembled from permanent school records, guidance counselors, and teachers.

Information from participating teachers was assembled from a series of instruments: a questionnaire, Teacher Attitude Toward the Course; forms for recording teaching time demands both prior to and during the course, information regarding educational and occupational background and experience, and teachers' opinions about desirable further education and experience; financing; rating and description of instructional materials used; their end-of-year evaluations of the pilot programs; and reports of students' work experience during the courses.

Stanford achievement tests (26) for measuring student reading ability and numerical competence were administered once during the school year as a means of determining the level of basic abilities required by occupational education classes and entry-level jobs of the type for which students were trained.

In addition to visits to the pilot programs in the fall and spring by the project leader and staff to collect pretest and posttest data, visits were made midway through the programs to observe classes, answer teachers' questions, and interpret evaluation instruments. Two conferences of teachers, research staff, and New York State Bureau of Home Economics Education personnel were held in Albany which provided an opportunity for teachers to ask questions, report on their programs, and compare resource materials with others. Interested school administrators and guidance personnel also attended the spring conference.

At the conclusion of the occupational course students were followed into their summer or permanent jobs by means of a series of double postcards which asked for student job information. The follow-up of students who returned to school was terminated September 1 with the mailing of a questionnaire and a job satisfaction scale, "My Job", to the student and a letter and descriptive rating scale to his employer. Students who graduated or otherwise left school were followed until December first.

Copies of all instruments used in the collection of data are included in the Appendix.

Development of the Instruments

A number of instruments were used to measure progress toward the objectives of the study. Some evaluation instruments used in the current study were developed in earlier research projects carried out by the Department of Home Economics Education: the Linton study (6) and a pilot study in occupational home economics conducted at Ithaca High School(16).

The previously developed measures used in the study were:

a. Attitudes Toward Work scale
b. Becoming Employable scale, a descriptive rating scale to measure personal qualities which help make young people employable.
c. Descriptive rating scale for measuring competence in a specific skill, that of waiter/waitress.
d. Reactions to Children of Various Ages.
e. Married Women Working.

The instruments developed expressly to meet the objectives of the present study were:

a. Three descriptive rating scales of a general nature to complete the series of four general scales applicable to many entry-level jobs, of which the Becoming Employable scale is the first: Management, Safety, and Sanitation.

b. Descriptive rating scales, designed for use in conjunction with the four general scales, to measure specific skills taught by the courses: Child Care Center Aide (a series of seven scales), Dietary Aide, Family Meal Specialist, Cafeteria Counterman, Short Order Cook, and Cook's helper.
c. Descriptive rating scales used as part of the follow-up of students into their jobs: Employer's Rating of Trainee in Home Economics Occupational Education and in a rating of job satisfaction by the employee, "My Job."
d. Questionnaires and data sheets for collecting student background information from guidance counselors.
e. Follow-up communications to both former students and their employers.
f. Checklists of facilities desirable for training child care center ideas and food service workers.
g. Forms for collecting pertinent data from teacher records.

Certain instruments developed for the Ithaca or Linton studies were refined or adapted for the current study. They included:

a. Achievement tests for the appropriate samples, child care or food service, designed to measure progress toward cognitive objectives of the occupational classes.
b. Interview schedule used at the completion of the course.
c. Student Questionnaire
d. Personal Data Sheet.

Copies of all evaluation instruments are included in the Appendix.

Descriptive Rating Scales

It was foreseen in the Ithaca pilot study (16) that, as courses in occupational home economics were initiated throughout the state, scales for rating a number of job competences would be needed. These were conceived of as a series of detailed scales describing performance on specific jobs, built around scales of a general nature which measure qualities common to many entry-level jobs.

The Becomimg Employable scale designed for the Ithaca study incorporated appearance, cooperation with co-workers, acceptance of supervision, attitude toward regulations, dependability, adaptability and initiative, attitude toward the public, pride in job, and suitability for job. The Management scale developed for the present study has as sub-scores speed of work, attention to job, body mechanics, use of equipment, and adjustment to new and/or unpleasant situations. The Safety scale includes attire, using machines, climbing, lifting and carrying, sharp utensils, burns and attitude toward safe procedures. The Sanitation scale is concerned with health and personal hygiene, sanitary food storage, food preparation and serving.

Twelve descriptive rating scales were designed to evaluate specific competences taught by the courses: measures of the food service skills of cafeteria counterman, dietary aide, cook's helper, family meal specialist, and short-order cook. It was felt that one job competence taught by some food service classes, caterer's assistant, could be adequately measured by the combined use of the Cook's Helper scale and the Waiter-Waitress scale developed earlier for the pilot class. Specific scales for measuring competence as a child care center aide cover seven major responsibilities of the typical aide: communication with children, interaction with children, assisting with routines, protecting the health and safety of children, assuming the leadership role, assisting with equipment and supplies, and assisting with arts and crafts.

Two descriptive rating scales were developed for use in the follow-up study of students into their jobs. One scale allows the employee to express his satisfaction with his job, through his rating of his employer, physical and mental exertion demanded by the job, co-workers, working conditions, salary and benefits, and his specified duties. The scale for determining satisfaction of the employer with his new employee is a highly condensed, one-page document which includes appearance; relationships with supervisors, co-workers, and public; production: quantity, quality, safety, initiative; and dependability: integrity, loyalty, and absenteeism.

All rating scales have five intervals. Three levels of performance are described in detail. Level one describes employee or student behavior that represents unacceptable performance. Level three describes adequate performance so that the student is minimally employable. Level five describes excellent performance on the entry-level job. Levels two and four are not described but provide additional intervals for rating the student-employee. An effort was made to keep rating scales simple and short for ease of use; however, for purposes of evaluation enough detail needed to be provided to enhance discrimination and a yield of reliable scores.

Motivation for Enrollment and other Background Data

One objective of the study was to determine the relationship between course effectiveness and such characteristics as motivation for enrollment, age, IQ, academic ability, and SES. Information was obtained from school records, the Personal Data Sheet, and the Student Questionnaire, an instrument which probed feelings toward areas thought to be motivating factors for enrollment in occupational home economics: attitudes toward food service and child care jobs, interest in earning money through supervised work experience, concern with individual school problems, attitude toward home economics, interest in occupational training, and expectation of help with personality problems. A Guttman scale developed by Brookover (4) was also incorporated in the Student Questionnaire. (Reprinted from "Self-Concept of Ability Scale" by Wilbur B. Brookover et al by permission of Michigan State University. Copyrighted 1962). The Personal Data Sheet was adapted from a similar form used in the Linton study (6), and provided information directly from the student about his background: family SES, parents' education, and family solidarity; the student's job interests and future plans; student's work experience at home, in volunteer work, and outside paid employment; and girls' expectations of working outside the home throughout various stages of the family life cycle.

Guidance counselors were asked to provide information about the student's attendance record, rank in class, academic achievement, health, handicaps, and the results of any intelligence or aptitude testing. A checklist was developed for use by both counselors and teachers which listed possible criteria for placement of students into occupational courses. The counselors and teachers were asked to indicate criteria they used in student selection prior to the course and, at the conclusion of the course, to evaluate the effectiveness of the criteria used.

Interview Schedule

The purposes of the interview schedule were to determine student attitudes toward the course at its completion, to investigate progress toward appropriate objectives of the course, and to solicit suggestions for making the course a more meaningful experience.

Determining Quality of the Instruments

Validity

Content validity of the instruments was established through interviews with professors in the departments of Child Development and Family Relations, Household Economics and Management, and Institution Management, in the New York State College of Home

Economics and with professors in the New York State School of Industrial and Labor Relations; home economics, distributive education, and other vocational education teachers at the secondary level; the representative of a civil service employees' association, employers of workers in entry-level jobs. A thorough review of professional training manuals, descriptive rating scales commonly used in business, and other relevant literature was made. Content validity of the two achievement tests was additionally supported by compliance with tables of specifications which had as their basis course behavioral objectives and the subject matter topics: Adjustment to the World of Work, Management for Effective Living at Home and on the Job, and Development of Competence in Food Servic or Child Care.(Appendix). Some instruments, such as the Student Information sheets for guidance counselors, follow-up communications, and interview schedule relied for content validity on meeting objectives of the study. Teacher record forms were also related to project objectives. Additionally, the teacher of the Ithaca pilot program served as advisor for both content and format of the teacher records.

Teachers participating in the study were asked to comment on the Family Meal Specialist descriptive rating scale, thereby serving as a panel of experts for the validity of that instrument. Ten students enrolled in distributive education classes in a secondary school approved the content of the "My Job" descriptive rating scale. The Stanford achievement tests (26) were recommended by a testing specialist for the Ithaca School district as particularly suitable for determining numerical cmeptence and reading ability of the sample.

Reliability

Item Analyses. Item analyses of instruments were made when appropriate to determine the ability of the items to differentiate between students who achieved high scores on the measuring instruments and those whose scores were low, with the cutoff point for the upper and lower groups set at 27% of the total. In the case of the achievement tests the Ahmann and Glock (1) formula was used. The formula was adapted for situations where each item had a maximum value greater than one, as in the descriptive rating scales. Additional change in the basic formula was required for item analysis of rating scales when cells were left blank. The two formulae adaptations are included in the Appendix.

The level of difficulty of items on the two achievement tests was also determined (1). Information regarding both item discrimination and level of difficulty is included with the instruments in the Appendix.

Student Questionnaire. The Student Questionnaire presented a special case in the establishment of reliability because of its many subsections. The instrument was presested in the Ithaca pilot study as a Motivation for Enrollment questionnaire, and included for the present study a scale, Self-Concept of Ability, developed by Brookover (4). Other sub-sections devised for the project were designed to scale according to the Guttman technique. In instances where Guttman-type scales were not obtained, reliability was checked according to Hoyt-Stunkard (15), a method based on analysis of variance. The Brookover instrument had scaled according to the Guttman theory for the Michigan study, but did not do so for the sample in the present study.

Descriptive Rating Scales. Reliability of the descriptive rating scale measuring job satisfaction, "My Job," was tested by administering the scale to ten distributive education students in a secondary school, then re-administering the scale to the same sample after an interval of two weeks. A coefficient of stability, using the product-moment coefficient of correlation, was computed.

Four separate trials were used to check inter-rater reliability of the scales rating child care aides. For each of the trials groups of two or three raters independently and simultaneously scored the observable behavior of assistants in nursery school or day care programs who were unaware of the specific purpose of the observations.

> Consensus of judges' scores on the individual cells served as one criterion of reliability. In order to determine reliability between judges, each judge's ratings for each aide was summed, then divided by the number of cells used to rate the aide. The result was a mean rating for each aide given by each judge. Using the Pearson Product Moment Correlation, the relationship between mean ratings for the four reliability trials was calculated (10).

The four general scales, Becoming Employable, Management, Safety, and Sanitation; five scales measuring specific job skills, Waiter/Waitress, Cook's Helper, Cafeteria Counterman, Dietary Aide, and Short Order Cook; and the Employer's Scale were checked by employer-supervisors of young workers in entry-level jobs in real work situations in county hospitals, a large state mental hospital, and commercial restaurants. The simple range was used as a helpful rule-of-thumb for locating ambiguous items; such items were rewritten and submitted for further checks. Groups of judges varied in size from two to four; each scale had at least two reliability checks. The reliability checks involved fewer personnel than desirable because the typical food service worker has few supervisors who are qualified as well as sufficiently acquainted with his work to judge his performance. A University professor of statistics recommended that rank correlations of judge's ratings be used to establish the degree of agreement between judges since a well-known problem in establishing inter rater reliability is the phenomenon of one rater working from a more demanding frame of reference than another. Rank correlations, according to the advisor, tend to equalize rater standards without confounding the data.

Pooling ratings of judges has been shown to more accurately measure job performance than reliance upon the judgment of one or two raters. The Spearman-Brown Prophecy Formula is routinely used to adjust ratings to the pooled judgment of 6-10 judges (29). Rank correlations obtained in the present study for purposes of establishing inter rater reliability were first averaged for each reliability check of two to four judges and then stepped up with the Spearman-Brown formula to represent the pooled judgment of six comparable raters.

Achievement Tests. The two achievement tests, Preparation for Employment in Child Care and Preparation For Employment in Food Service, were pretested before use in the present study on approximately 100 students comparable in age and academic background to the current sample. Level of difficulty was determined for each item on the achievement tests as well as the indices of discrimination. Items having low discrimination indices were discarded or rewritten as dictated by the requirements of the tables of specifications (Appendix). Test reliability was determined by means of the split-halves technique.

Statistical Analysis to Determime Interrelatedness of Variables

In addition to the analyses necessary to determine quality of the measuring instruments three major analyses of data were made in the study. One involved the compilation of an index of student success in individual occupational classes and correlation of each index with relevant variables. The second was concerned with correlation of student scores for the total sample with selected variables. The third was a multiple regression analysis of two instruments: Attitudes Toward Work and Employer's Rating Scale.

Compilation of Index of Success in Occupational Home Economics

An index of student success in classes in occupational home economics first developed for the Ithaca pilot study was compiled from scores on the Attitudes Toward Work Scale, achievement test, and rating scores appropriate for the individual course. The score on Reactions to Children of Various Ages was included in the index for child care classes. All scores for the index were post-scores; teacher ratings were used for the scores on the descriptive rating scales. In all cases the four general scales--Becoming Employable, Safety, Management, and Sanitation--were used. In most instances the index includes an average of scores achieved on the scales measuring competences specific to food service or child care.

Index scores were then related to several variables, using rank correlations--a non-parametric statistic deemed appropriate to the nature of the data and the size of the individual samples. The variables included academic average, SES, total hours of supervised work experience, and subsection scores on the Student Questionnaire.

Scores from tests of intellectual capacity, grade point averages, and units earned in vocational education courses were obtained from school records. Socioeconomic status was determined by comparing the occupation of the chief breadwinner of the family with the National Opinion Research Center Scale (14) and the approximate scale number was assigned each student. Not all jobs were listed on the NORC scale and the investigator arbitrarily assigned ratings, using the scale as a guide. See Appendix for the exact ratings of jobs.

Correlation Matrix - Total Sample

A correlation matrix was computed for student pre- and posttest scores and selected variables for the total sample, employing the CORMA program available at the Cornell Computing Center. The program computes a product-moment correlation coefficient for every possible paring of variables and estimates means, variances, and standard errors of all observations of each variable. Pretest and posttest scores on the battery of tests and teacher ratings on performance scales were correlated with each other and with other relevant variables. Variables related to student background which were intercorrelated with test scores were sex, grade, SES, IQ, age, health, parents' education, units earned in vocational education classes, school attendance, and academic average. Girls' expectations of working during various stages of the family life cycle were included along with variables concerned with the follow-up of students into jobs.

Fifteen variables determined intercorrelations among factors related to type and amount of work experience prior to and during the course. A supplementary Corma showed interrelationships among student,employer, and teacher ratings on the scales measuring employability characteristics and performance. The complete list of variables is included in the Appendix.

Multiple Regression - Attitudes Toward Work and Employer's Rating Scale

Data concerning attitudes toward work for the total sample and employer ratings received for 25 trainees were further analyzed using the Cornell Computing Center MUREG program. The program carries out the standard calculations for multiple regression. Both direct and stepwise regression analyses are available. For the present study the stepwise regression program was used; the program fits the independent variables one at a time in the order in which they account for the reduction of the sum of squares of the dependent variable. Thus the first independent variable chosen is that one of all the independent variables which has the greatest correlation with the dependent variable, post-scores on the Attitudes Toward Work scale in the first analysis and Employer ratings in the second, in the data concerned. The program then ascertains which of the other independent variables, when fitted in combination with the first one chosen, leads to the largest per cent of explained variance, and so on. Variables are added until, if one more were to be added, the square of the multiple correlation would be increased by less than .001.

The independent variables used in the multiple regression analysis for the Attitudes Toward Work scale were: IQ, age, score on Stanford achievement test for reading (26), teacher post-rating on the Becoming Employable descriptive rating scale, cumulative grade point average, post-scores on the Attitude Toward Home Economics, Attitude Toward School, Interest in Type Job, Interest in Occupational Training, Self-Confidence, Attitude Toward Working with Others, and Concept of Self in the World of Work scales.

The number of employer's ratings (n=25) was far too small to give much credence to the results of multiple regression analysis, since there is so little information available in the area of occupational education, however, the analysis was made. Similar studies will be made on larger samples in later planned research. The independent variables for the analysis were: reading ability, numerical competence, teacher rating on the Becoming Employable descriptive rating scale, total hours of work experience, amount of outside work experience, average of teacher post-ratings on descriptive rating scales measuring specific skills, job satisfaction scale, current grade point average, cumulative grade point average, and post-scores on the Attitudes Toward Work, Attitude Toward School, and Self-Confidence scales, and post-scores on the Married Women Working questionnaire.

RESULTS: QUALITY OF INSTRUMENTS

The instruments required for evaluation of the experimental classes in home economics occupational education were clearly indicated by the objectives of the research study. A major objective was the evaluation of student progress toward specific objectives related to knowledge, job competences, and attitudes toward work. The Attitudes Toward Work scale, achievement tests, and descriptive rating scales were used to meet this objective.

A second major objective was the determination of the relationship between 1) student progress in the course and 2) student success in the working world to such student characteristics as motivation for enrollment, age, academic ability, SES, and student satisfaction with the course. The Student Questionnaire, data supplied by school guidance counselors, Stanford achievement tests for reading and numerical competence, Personal Data Sheet, follow-up descriptive rating scales, and interview schedule contributed to the satisfaction of this objective.

The third major objective undertook the provision, by means of descriptive data, of answers to questions pertinent to occupational home economics which have been raised by secondary school personnel and university teacher-educators. A series of questionnaires, checklists, and other record forms for teachers and guidance counselors were used to collect data. Observation of classes by members of the project team also contributed to the achievement of the objective.

Student Questionnaire

Content validity of the original instrument, used in the Ithaca study, was based on review of published inventories and consultations with colleagues in home economics education who had worked for many years with young people. The investigator found general agreement on observed interests and problems common to young people which could be motivating factors for enrollment in an occupational home economics class. The format of the original Motivation-for-Enrollment questionnaire was changed from a Likert-type scale to the multiple choice questionnaire. Items having highest discrimination indices were selected from the original instruments and certain additions were made, principally the inclusion of the Brookover scale, Self-Concept of Ability,(4) and items designed to measure self-confidence and general self concept. Teachers and other trained observers of the Ithaca study had pointed out the improved self confidence and self-esteem exhibited by girls enrolled in the pilot class and the project staff wished to establish a concrete measure of these qualities.

The Brookover items measuring self concept of ability did not scale according to the Guttman technique on the project sample of occupational education students. Guttman scales were obtained however, with acceptable coefficients of reproducibility and coefficients of scalability (21) for the following subsections: Interest in Occupational Training, Attitude Toward School, Attitude Toward Type Job, Attitude Toward Working With Others, Self-Confidence, and Expectation from the Course. Two remaining subsections, Interest in Earning Money and Attitude Toward Home Economics, did not scale according to the Guttman theory and were used as Likert-type scales. Both instruments had reliability coefficients of .98 when analyzed by means of the Hoyt-Stunkard technique (15). Table 2 presents data on the quality of the attitude scales. Copies of the individual Guttman scales are included in the Appendix. No attempt was made to secure a Guttman-type scale for the subsection, Concept of Self in the World of Work. A 25-item Likert-type scale was found to have a reliability coefficient of .88 according to the Hoyt-Stunkard Method.

Descriptive Rating Scales

Content validity of the descriptive rating scales was established through study of similar scales commonly used in the food service industry and other businesses, interviews with employers of young people in entry-level jobs in food service and child care, and repeated consultation with appropriate University personnel. The employers were especially helpful in providing limits which would, in their opinions, make a student unemployable, an acceptable employee, or a very good employee.

The investigator found that employers in food service have certain standards for entry-level jobs which are higher, according to the literature and an interview with a university personnel director, than entry-level jobs in general. Employers of food service personnel require dependability, pleasant disposition and ability to cooperate, as minimums. Although absenteeism is apparently a problem in many entry-level jobs, food service employers pointed out that their operations require a full complement of personnel who are willing to step in when and where they are needed. A food service employer in a large state institution said her requirements for employability characteristics are very strict because employees have tenure after a six month probationary period. Since employability characteristics serve

Table 2

Reliability: Student Questionnaire

Guttman-Type Scales

Name of Subsection:	Coefficient of Reproducibility		Coefficient of Scalability	
	Fall	Spring	Fall	Spring
Attitude Toward School	.87	.89	.54	.56
Attitude Toward Type Job	.90	.92	.64	.67
Interest in Occupational Training	.90	.90	.63	.64
Expectation from the Course	.91	.91	.42	.59
Self-Confidence	.91	.92	.66	.68
Attitude Toward Working With Others	.91	.90	.66	.63

Likert-Type Scales

Name of Subsection:	Reliability Coefficient
Interest in Earning Money	.98
Attitude Toward Home Economics	.98
Concept of Self in the World of Work	.88

as a screening device, she expressed the hope that educators will strongly impress students with their importance and, especially, with that of the crucial job interview.

The representative of a civil service employees' association for a state institution was also asked to comment on the descriptive rating scales. He felt that the scales were appropriate for their purposes and said the intent was clear: to help employees improve on the job and move up to better positions.

High school students enrolled in distributive education classes were asked to comment on the validity of the job satisfaction scale, "My Job"; all reacted favorably and could suggest no changes or improvements. The same ten students checked the reliability of the job satisfaction scale by means of the test-retest method. The resultant coefficient of stability was .85.

The reliability of the general descriptive rating scales and the scales specific to food service was checked by employers of young people in entry-level jobs in food service in restaurants and institutions such as county hospitals and a large state hospital. The range of ratings for each item, as determined for the latest revision of the scale, is shown on the copies of the scales included in the Appendix. The range shows the divergence of the ratings for any particular ratee. The range was kept to an interval of two as a minimum standard for items and was as low as one or zero in many instances.

Rank correlations for pairs of judges were computed and the correlations for the reliability check on any one ratee were averaged and then stepped up with the Spearman-Brown formula to represent the pooled ratings of six judges. Reliability checks for each scale were averaged in turn. Table 3 shows the degree of interrater agreement reached by this method for each scale.

Calculations were also made to determine values of r when correlations were stepped up to represent the pooled ratings of nine judges, an illustration, of the effect on rating scale reliability of increasing the number of raters. Correlation coefficients ranged from a low of .66 to a high of .88, on the basis of six judges, with the general scales having a mean correlation of .70 and the specific scales a mean of .78.

The child care descriptive rating scales were treated somewhat differently: reliability checks were made by project staff members who did not have an opportunity, in the four separate trials, to observe performance for each item on the seven scales specific to child care jobs. A statistical advisor for the present study suggested that mean ratings for each aide observed be compared, using the product moment correlation. A coefficient of .70 was obtained in this manner.

The index of item discrimination is indicated, along with the range, for each item on the copies of the descriptive rating scales found in the Appendix. D-values ranged from .21 to .51 on the four general scales, from .20 to .63 on the scales specific to food service, and .00 to .75 on the child care scales.

Table 3

Reliability of Descriptive Rating Scales

	Number of Pairs of Judges	Number of Reliability Checks	Value of r 6 Judges	Value of r 9 Judges
General Scales:				
Becoming Employable	20	8	.66	.75
Management	17	7	.69	.75
Safety	20	8	.74	.81
Sanitation	18	8	.72	.79
Employer's	23	15	.68	.76
Specific Scales:				
Cafeteria Counterman	7	3	.88	.92
Cook's Helper	4	2	.87	.91
Dietary Aide	6	2	.70	.78
Short Order Cook	4	2	.66	.74
Waiter/Waitress	4	2	.84	.89
Child Care Aide	6	4	.70	.78

Achievement Tests

Item analyses were made on the achievement tests to which students responded at the spring posttesting. Forty-eight items in the 67-item achievement test, Preparation for Employment in Food Service, had acceptable indices of discrimination of +.26 to +.87 (1) Eleven items included in the achievement test had adequate D-values in the pretest but did not reach desirable levels of discrimination for the food service sample in the present study. Eight items were known to have a low level of discrimination but were included in the test to meet the demands of the table of specifications. Three items common to both the child care and food service achievement tests had adequate D-values for the child care sample but not for the food service sample.

Ebel wrote, "Items of middle difficulty, that is, from 25 to 75 per cent correct response, are all capable of contributing much to test reliability" (7) In the food service achievement test 52 items were found to be of middle difficulty for the occupational education sample; eight items were too hard and seven were too easy to contribute to test reliability.

The 64-item achievement test, Preparation for Employment in Child Care, had 41 items with acceptable discrimination indices according to an item analysis based on the sample of 20 child care aides. Twelve items testing knowledge and understanding of child care concepts had low discrimination indices for the small sample, but had D-values in a pretest prior to the course of .21 or higher. Six items having D-values below .20 for the child care sample were also poor in the pretest for a sample of vocational students of similar age and background to the students in the pilot programs; the items had been revised but without apparent success. Two items common to the food service achievement test had low discrimination indices for the child care sample and acceptable D-values when administered to the food service sample; two common items had low D-values for both samples. One item was not pretested. For the sample of 20 students who took the child care achievement test 38 items had an acceptable level of difficulty; 10 items were too difficult and 16 too easy to contribute to test reliabiltiy.

Test reliability, as determined by the split-half procedure, was .82 for the food service achievement test, based on a sample of 92; the reliability coefficient for the child care achievement test, based on the small sample of 19, was .68.

RESULTS: COURSE EFFECTIVENESS

Index of Success

A major objective of the evaluation of occupational home economics classes was to determine the relationship between course effectiveness and a number of variables, among which were selected student characteristics, amount of supervised work experience, motivation for enrollment, and success in obtaining jobs. An index of student success was developed by ranking students according to their posttest scores on seven instruments: the four general descriptive rating scales, Becoming Employable, Management, Sanitation, and Safety; an average of scales rating specific skills taught in the course; the Attitudes Toward Work scale; and the final achievement test. The appropriateness of combining the independent rankings was determined by calculating Kendall's concordance coefficient, W. When the sums of ranks were compiled for two of the classes ties resulted, which were broken by assigning the higher rank to the subject with the lesser sum of squares of ranks according to Johnson (17).

The values of W were sufficiently high to reach a significance level of .001 in six of the 12 classes, .01 in three, and .05 in two classes. In one class, a Home Economics 14 program, agreement of the various ranks reached only the .20 level; test results from this class were included in the general findings for the total occupational home economics sample, but no individual analysis based on the index was made. The values of the concordance coefficient, W, and the levels of significance reached (25) are listed in Table 4.

Table 4

Values of Concordance Coefficient, W, for Indices of Success

Class:	W	Significance	n
1	.62	.001	20
2	.22	.20	11
3	.46	.05	4
4	.39	.01	10
5	.62	.001	8
6	.66	.001	10
7	.44	.01	10
8	.68	.001	12
9	.58	.001	7
10	.45	.001	11
11	.33	.05	5
12	.71	.01	4

Relationships Between Indices, Student Characteristics, and Work Experience

Ranks on the indices of student success were compared with ranks on such measurable characteristics as IQ, academic ability, SES, total amount of supervised work experience, total units of vocational education, and the following subsections of the Student Questionnaire which are felt to be motivating factors for enrollment in a wage earning course: attitudes toward home economics, occupational training, the type of job for which training was offered, school, working with others, as well as interest in earning money, self confidence, concept of self in the world of work, and expectations from the course.

The significance of the Spearman rank correlations was determined according to Siegel (25). When ties in ranks occurred, a correction factor was introduced.(25)

Table 5 shows the variables associated with the indices of success for individual schools. The variables found to be most often associated with student success in occupational home economics were self-confidence, concept of self in world of work, attitude toward school, academic ability, and attitude toward working with others. Attitude toward home economics and student expectations from the course were related to the index in more than one class; total hours of work experience, SES, total units of vocational education courses, attitude twoard food service jobs, and desire for occupational training were significantly related to success in one of the occupational courses. Interest in earning money was not found to be an important factor.

In the case of instruments which were administered twice, variables correlating significantly with the index usually represented post-scores. Four pretest scores were significantly related to the index of success: Self-Confidence, Attitude Toward Working with Others, Expectations from the Course, and Concept of Self in the World of Work, with fall scores for the self concept measure proving significant for three classes, and the remaining two measures for a single class each.

Difference Between Pretest and Posttest Scores

A measure of effectiveness of the year's instruction and work experience was provided by determining the significance of difference between pretest and posttest scores on each of the

Table 5

Rank Correlations: Index and Selected Variables

Class:	R	NC	Cum GPA	Crnt. GPA	WE	SES	Units Voed	ITJ F	ITJ S	OT F	OT S	AHE F	AHE S	n
1		.60**	.52*	.72**					.41*				.57**	20
2														11
3														4
4					.60*								.57*	10
5		.68*												8
6				.56*										10
7						.64*								10
8	.54*			.79**										12
9														7
10		.67*		.76**			.60*				.70*			11
11														5
12														4

Key:
R= Reading Ability
NC= Numerical Competence
Cum. GPA= Cumulative Grade Point Average
Crnt GPA= Current Grade Point Average
WE= Total Hours Work Experience
SES= Socioeconomic Status
Units Voed= Total units vocational education courses
ITJ= Interest in Type Job
OT= Interest in Occupational Training
AHE= Attitude Toward Home Economics
F,S= Fall, Spring

**Significant at .01
* Significant at .05

Table 5 (Continued)

Class:	IEM		ATS		S-C		EFC		AWO		C of S		n
	F	S	F	S	F	S	F	S	F	S	F	S	
1				.45*		.60**				.48*		.61**	20
2													11
3													4
4						.59*					.82**		10
5				.65*	.84**								8
6							.78**			.71*			10
7						.85**				.67*	.67*		10
8									.66*				12
9								.77*					7
10				.57*	.61*					.54*	.65*		11
11								.90*					5
12				.98									4

Key: IEM= Interest in Earning Money
ATS= Attitude Toward School
S-C= Self-Confidence
EFC= Expectations from the Course
AWO= Attitude Toward Working with Others
C of S= Concept of Self in World of Work
F, S = Fall, Spring

** Significant at .01
* Significant at .05

following instruments: Married Women Working, Foods or Child Care Achievement Test, Attitudes Toward Work, Self-Confidence, Concept of Self in the World of Work, Attitude Toward Working with Others, Expectations from the Course, Interest in Type Job, Interest in Occupational Training, Attitude Toward School, Attitude Toward Home Economics and both student self-ratings and teacher ratings on the four general descriptive rating scales of Becoming Employable, Management, Safety, and Sanitation. Pre- and posttest scores on the instruments were compared using a non-parametric statistic, the Wilcoxon matched-pairs-signed ranks test(25), felt to be appropriate for analyzing results in the small individual samples selected for inclusion in the study. Tables 6 and 7 summarize changes in pretest and posttest scores for the 12 classes in the total sample.

The most significant changes in pretest and posttest scores were found for the achievement tests measuring knowledge and comprehension of child care or food service concepts, adjustment to the world of work, and management at home and on the job; and for interest in occupational training. Scores for Attitudes Toward Work, Self-Confidence, Concept of Self in the World of Work, and Attitudes Toward Home Economics changed significantly in three classes. Improved Attitudes Toward Home Economics scores were shown for one food service class and two child care classes.

Self confidence, as measured by a Guttman-type scale, improved significantly in three food service classes and Attitudes Toward Work showed positive gains in two food service classes and negative change in another. More positive attitudes toward food service jobs developed in one class; more negative attitudes in another. Self concept scores went up in three food service classes. Student expectations from the course increased significantly in two food service classes and scores on the Married Women Working questionnaire, scored to indicate total commitment to working throughout the family life cycle, showed increased commitment in one food service class; in another, the commitment to work relaxed.

Attitude Toward Working with Others improved significantly, according to the Guttman scale, in one child care class. Attitude Toward School did not change significantly for any of the 12 classes in the total sample. Most statistically significant changes in pre- and post-scores were positive, with the only negative changes occurring in a single class in Attitudes Toward Work, Married Women Working, and attitude toward food service jobs.

Student Interviews

Two key questions on the interview schedule asked for the student's assessment of his class--the features he had found most

Table 6

Significant Changes in Pretest and Posttest Scores

Class:	MWW	Ach T	ATW	S-C	AWO	EFC	IOT	ATS	ITJ	C of S	AHE
Food Service:											
1		.01	.09	.04		.01	.05		.01		
2											
3											
4		.01	.07	.02		.05	.04				.03
5		.01		.01			.04			.07	
6		.01									
7	-.08		-.02				.01		-.01	.02	
8		.01									
9	.02						.02			.08	
Child Care:											
10		.02									.03
11					.06						.06
12											

Key: MWW= Married Women Working
Ach T= Achievement Test: Foods or Child Care
ATW= Attitudes Towards Work
S-C= Self Confidence
AWO= Attitude Toward Working with Others
EFC= Expectations from Course
IOT= Interest in Occupational Training
ATS= Attitude Toward School
ITJ= Interest in Type Job
C of S= Concept of Self in the World of Work
AHE= Attitude Toward Home Economics

Table 7

Significant Changes in Pre-Ratings and Post-Ratings

Class:	Teacher Ratings				Student Self Ratings			
	BE	MGT	SFTY	SNTN	BE	MGT	SFTY	SNTN
Food Service:								
1					.02		.05	
2	.08		.05	.02				
3								
4			.10		.04	.02		
5	.01	.01	.01	.01				
6	.08				.05			
7	.01	.03		.01	.01			
8	.01	.01	.01	.01	.02	.04		
9								
Child Care:								
10	.02	.05		.01				
11								
12								

Key: BE= Becoming Employable
MGT= Management
SFTY= Safety
SNTN=Sanitation

helpful in his experimental course and suggestions for making the new programs even more meaningful. Supervised work experience played a prominent part in student responses to the two questions. Supervised work experience of any kind was seen by the students as useful, whether under school auspices or for an outside employer. The students, however, nearly unanimously endorsed paid work experience for an outside employer as an indispensable part of occupational education. Students who worked only in the school, even when paid the minimum wage, were disappointed with the work experience aspect of their occupational course. Many students had enrolled for the express purposes of earning money, exploring several types of jobs, and finding out what to expect on the job. Students were especially pleased, according to the interviews, when they had opportunities to practice specific work skills in class and then to go out on a job and find their training relevant to a real work situation.

Since the major purpose of the student was to get a job, anything that helped him choose an occupation or prepare for work was seen as helpful: learning large quantity cookery techniques and use of commercial equipment, learning about people--how to work with others and what to expect from the public. These were restless students, eager to take their place in the world. They expected that their occupational course would be different, and their expectations were largely met. The differences they expected included, in addition to work experience, an active class with demonstrations, practice in simulated work experience, field trips to places of potential employment, visits from resource people, and informal discussions. When the class fell short of their expectations the students were voluble in pointing out what they saw as weaknesses.

Students were asked, during the interviews, whether their background of home economics courses had been adequate for the occupational class and whether such courses should be required for enrollment in an occupational class. The majority found their extensive background of home economics courses necessary for success in occupational classes, especially in food service. Some students, already possessing a strong background, said they needed more and the rare class which did not have a background of basic home economics said it was needed. A quarter of the sample, however, thought students could still gain a good deal from the occupational classes if they had less background. They pointed out that heavy requirements for entrance to the occupational classes tended to exclude boys, who seldom have so many basic home economics courses.

Most students felt adequately prepared, at the time of the interviews, for entry-level jobs in food service or child care. Girls were asked whether they thought they had gained sufficient training, if they followed the common pattern of leaving the labor market to raise families, to return to a food service or a child care job at some later period in their lives. Most girls felt competent to handle entry-level jobs at any period in their lives; a few said they would like refresher courses first.

When students were asked which type of food service or child care jobs interested them most their replies depended upon the richness of their course. Those students who had a wide variety of experience in class and on the job were more selective in their choice of jobs than those who had little chance to explore work opportunities. Their reasons for selecting certain jobs were most commonly having tried the job and liking it and feeling competent to handle the work. Liking to meet people and enjoying helping and serving others also influenced their choices.

Many students in the experimental programs had recommended the courses to other students at the time of the interviews, one indication of a pleased consumer, although comments of the students suggested that other students in the schools were well aware of the activity and differences of the new courses and did not require any special recommendation.

Many students expected to go on for further education in food service or child care or other areas of interest. Some classes visited technical schools as well as commercial establishments in order to acquaint students with the advantages of and possibilities for additional training.

Work Experience

Finding suitable work experience for the classes was a slow process, according to the students themselves, during the first year of the program. Even in those classes having strong work experience programs the students asked, during the interviews, for more jobs earlier in the course. A few teachers in the study felt their students should take the initiative in finding jobs but the strong programs, from the viewpoint of the students, were those where the teacher actively sought suitable work experience opportunities for her class and helped them make the initial contacts with employers. The Ithaca study (16) had shown that of 155 vocational education students those who had help from the school in obtaining jobs held higher status jobs at better pay and were more likely to hold jobs related to their vocational course than those who obtained jobs on their own.

Some students had as much work experience as they wanted and a few did not want to work at all but many students would have liked more hours of work. Most students wanted spending money; some were saving for further education. A few students earned as much as two thousand dollars during the school year.

The most striking finding in regard to work experience was that 51 of 68 students who had jobs (75%) were earning less than the minimum wage, usually $.50 - .75 an hour babysitting and mowing lawns, prior to the class; 43 of 53 working students (81%) were earning the minimum wage or more by the conclusion of of the course. Problems were encountered on the jobs held during the school year by surprisingly few students but were predictable: getting along with co-workers, low pay, transportation, and too many bosses. Students were disappointed when their jobs entailed more lowly work than their training warranted and disillusioned at some general practices they encountered on the job after all they'd been taught in class about sanitation. Students who worked in hospitals or nursing homes discovered that working weekends interfered with their social life. One teacher, who had a class of sophomores, anticipated the problem of finding them jobs because of their age, and with the help of her advisory committee set up class catering projects under her supervision for which students received $1.00 an hour.

Follow-Up Study

The follow-up study ended at the close of summer for those students who continued in school another year and therefore sought only temporary or part-time jobs. The follow-up continued until December first for students who graduated or otherwise left school and who looked for more permanent jobs. Responses were received from 100 of the 112 students who completed occupational education courses, Table 8. Fifty-eight students held jobs during the follow-up period of the study; 16 did not seek jobs because of their age or because they were needed at home. Twenty-one trainees, mostly the younger people in the sample, looked for regular jobs but were unable to get them. Five students who responded to follow-up communications went on for additional education: two to business school, two to junior colleges, and one to a school training dental assistants. More detailed information about individual classes is included in a section which follows.

Employer ratings based on the descriptive rating scales (Appendix) were received for 24 senior students in the total sample who, for the most part, sought permanent jobs; a few seniors worked during the summer and then went on to further

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Table 8

Follow-Up Study: Total Sample

Class:	Held Job	Could Not Get Job	Did Not Look for Work	No Response	Further Education	Total
Food Service:						
1:Area	6	8	4	1	1	20
2:HE14	4	4	3			11
3:HE13	1			2	1	4
4:HE13	9		1			10
5:HE13	7		1			8
6:HE13	9				1	10
7:HE13	7	1	1	1		10
8:HE14	2	6	3	1		12
9:HE13	5	—	—	2	—	7
Total:	50	19	13	7	3	92
Child Care:						
10:HE13	3	1	1	4	2	11
11:Area	3		1	1		5
12:Area	2	1	1	—	—	4
	8	2	3	5	2	20

education. Employer ratings, Table 9 ranged from 1.89 - 5.00, the highest possible score, and had as the mean 3.64. Job satisfaction scales, the "My Job" descriptive rating scales, were returned by 26 seniors who rated their jobs from 2.52 - 5.00 with a mean of 3.94. Employer ratings were received for 13 juniors who looked for summer jobs and for whom the follow-up terminated on September first. Scores on the Employer scale ranged for juniors from 3.43 - 4.45; the mean rating was 4.00. The mean rating of 19 juniors on the job satisfaction scale was 3.95 and scores ranged from 2.83 - 5.00. Just one employer rating of a sophomore was received, a score of 2.64 for a nurse's aide; three sophomores rated their jobs as 2.87 - 3.22, with a mean 3.03. Two freshmen students were rated at 3.82 and 4.54 by their employers; three ninth-graders judged their jobs at 3.65 - 4.22 with the mean at 3.90.

Median scores were also computed because of the small sample; in all cases they were within .1 of the mean score. Ratings of from 1.00 to 5.00 are possible on the descriptive rating scales. A score of 3.00 is intended to represent minimum employability and a score of 5.00 an optimum for an entry-level job. Scores below 3.00 represent undesirable levels of job performance.

Table 9

Results: Follow-up Descriptive Rating Scales

Employer Ratings

Class	Range	Mean	n
Seniors	1.89 - 5.00	3.64	24
Juniors	3.43 - 4.45	4.00	13
Sophomores	2.64	2.64	1
Freshmen	3.82 - 4.54	4.18	2
Total			40

Students' Job Satisfaction

Class	Range	Mean	n
Seniors	2.52 - 5.00	3.94	26
Juniors	2.83 - 5.00	3.95	19
Sophomores	2.87 - 3.22	3.03	3
Freshmen	3.65 - 4.22	3.90	3
Total			51

Forty-one of the 50 students for whom information about follow-up wage was available received the minimum wage or above during the period of the follow-up study. Of the nine students who received less than the minimum wage five had been enrolled in child care or food service courses in area occupational centers which did not have outside work experience as a part of the first year of the occupational course.. Work experience, rather, was planned in these schools as a part of the second year of a two-year sequence. Three students earning less than the minimum wage were members of Class Two, the ninth-grade class; one student earning less than the minimum was a course dropout.

Most of the students were successful on their jobs. Two students were not able to hold their first jobs, but did well on their second. When the students were asked what they liked about their jobs, their replies included the training on the job, gaining experience, meeting people, and the money they were able to earn. Problems encountered were those chronic with entry-level jobs: low pay, inconvenient hours, too many bosses, and uncooperative fellow-workers. Some students wanted to work more hours than were available to them; some food service workers did not like so much dishwashing.

Dropouts

Of 138 students enrolled in the 12 occupational classes which made up the sample for the present study 26 failed to complete the prescribed course, 5 boys and 21 girls. Fifteen of the 21 girls left school: three moved to another school district, nine left school because of pregnancy and/or marriage, one dropped from school because of difficulty in emotional adjustment, one was a post-graduate student who decided to work full-time instead of attending class, and one left for unknown reasons. Six girls remained in school but dropped the course, three of whom were enrolled in food service classes and three in child care programs. One of the three girls who dropped a child care class wanted a half-day schedule so she could work as a waitress; two girls decided they did not like food service jobs. Three of the five boys who failed to complete an occupational education course dropped out of school altogether; two dropped their food service course only.

Seventeen of the 26 students who did not complete the occupational education course answered follow-up cards and letters. Some, especially girls who left school because of pregnancy, wrote touching letters of appreciation for the help they'd received from their teachers. The dropouts had sometimes been able to support themselves through difficult days because of jobs their occupational education teachers had helped them get.

According to the follow-up information six girls who had not completed the occupational course were working at factory jobs at wages from $1.35 - 1.70 an hour. The hours of work per week varied; some were working part-time, either from choice or because full-time employment was not available. Four girls had worked but at the time of the follow-up study were staying home to care for their babies. One girl had a job as a legal secretary, one was a salesclerk at $1.50 an hour, another had occasional baby-sitting jobs, and one girl did not have a job. One boy who had dropped out of school was in the Army; two boys who dropped the course were working in a food market at $1.85 an hour or as a carpenter's helper at $1.50.

Class One

Index of Success

Variables found related to the index of success for the food service class taught at an area vocational school were numerical competence as measured by the Stanford achievement test (26), current academic average, and post-scores on the Attitude Toward Home Economics, and Concept of Self in the World of Work scales, all at the .01 level of significance; variables related to the index at the .05 level were cumulative academic average, and post-scores on the following: food service achievement test, Attitude Toward School, Self Confidence, and Attitude Toward Working with Others. Variables which did not correlate significantly with the index of success in this course were reading ability, total hours of work experience, SES, total units of vocational education courses, interest in occupational training, interest in earning money, and expectations from the course.

Pretest and Posttest Scores

Posttest scores which rose significantly from scores achieved at the initial testing were Expectations from the Course, Interest in Type Job (food service), and the food service achievement test, all at the .01 level of significance. Scores measuring self-confidence and interest in occupational training rose at the .04 and .05 levels respectively; Attitudes Toward Work gains reached .09, Table 6. There were no significant changes in teacher pre-and post-ratings on the descriptive rating scales. Post-scores for students' self-ratings on the Becoming Employable and Safety descriptive rating scales showed positive changes at the .02 and .05 levels, Table 7.

Student Interviews

Individual interviews revealed that students found the most helpful feature of the food service course to be learning techniques for large quantity food preparation and catering. Mentioned less often were table setting and service, learning to operate commercial equipment, sanitation, food service vocabulary, field trips, costing recipes, cake decorating, and learning about people.

When students were pressed for suggestions for making the course even more meaningful 13 said work experience should be a part of the first year of the course. Some typical comments mirrored their intense feelings on the subject of on-the-job training. A student who said she was thinking of dropping school said, "What's the sense in coming here unless we go out to work in the field?" Another commented, "I planned to drop out of school myself. Really, I had taken this course to see if I could get a job. When it turned out to be just in the room--all theory--I was disappointed." A third student said, "The course should have work experience after a certain length of time so the kids could build up confidence in themselves."

Five students said more space was needed, a contingency for which plans have been made. Three students felt more grooming for the job was needed; another three would have liked even more experience in quantity cookery and catering. Three found the long class periods tiresome and preferred more activity to "too many notes." Another student, however, felt the class period should be longer and the course offered for a third year. Two students wanted to see more boys enrolled in the class.

Suggestions made by only one student each included instruction in first aid, more cake decorating, more short order cooking, diet therapy, more garnishing, a textbook for reference, more resource people and field trips, and more time on foreign foods and novelty products. One student felt the class could be more challenging; another protested the scheduling, finding leaving her home school at 7:00 a.m. difficult. Two students were completely satisfied with the course as it was and could think of no way in which the class could be improved.

Eight students found home economics and mathematics courses a good background for the food service course and recommended that prior to enrollment students have at least one year of fundamental food preparation techniques and nutrition, preferably tailored as a prerequisite for the occupational class. Eight students felt no prerequisites were necessary for success in the class and four were undecided.

Fourteen of the 20 students felt ready, at the time of the interview, for jobs in food service. Boys in the class gave thoughtful answers to this question, making it clear that they felt prepared for entry-level jobs such as cook's helper, but not as the chefs or bakers they aspired to be. Four girls said they "probably" were ready at this time for a job in food service. The same proportion of students felt prepared for jobs in food service later in their lives, if taking such jobs seemed the best thing to do.

When students were asked which type of food service jobs were most interesting to them six replied that they wanted to be waitresses; four, dietary aides; seven, cook's or baker's helpers; one, a hostess; and one, a short order cook. Four aspired to higher level jobs: dietician, chef on an ocean liner, baker, and restaurant owner. Some students selected more than one job they would like to have. When asked why they chose the jobs they did, four said they liked to meet people, eight felt competent to handle the job they had chosen, two wanted to help older people and patients, and eight thought the job would be interesting and challenging. Sixteen students had recommended the course to others; four had not.

Six students in the class hoped to receive further training in food service at two-year technical institutes in the State University of New York. One student planned to attend business school and two to do office work. Six expected to work at entry-level jobs in food service in restaurants or hospitals. Three just expected to "work" after high school, without specifying the type of job; one boy and one girl intended to join the Navy.

Work Experience

At the time of the spring interview, just five students were being paid the minimum wage. Eight girls were earning $.50 an hour as babysitters and one boy did lawn work. Fifteen students said they had problems getting jobs, because of age, lack of experience, few work opportunities in small towns, and not knowing where to begin. Five students did not have trouble getting jobs: two did not want to work, one had help from her food service teacher in securing a job, one had as many baby-sitting jobs as she wanted, and one boy had lots of experience and no trouble getting jobs but said a problem on the job was "getting along with my boss and fellow workers." A girl working in the school cafeteria soon tired of cutting butter and washing dishes and felt she could handle more challenging jobs.

Seventeen students endorsed work experience as a part of an occupational course, two thought the class would not be well enough prepared for outside work experience until the second year of the course, and one student felt work experience was desirable in summer but not during the school year.

Outside work experience was planned as part of the second year of the two-year food service course; however, the final report on student work experience submitted by the teacher at the end of the year showed two boys having outside food service jobs during the school year and five students having paid outside work experience unrelated to their class: babysitting, housecleaning, or lawn work. Three girls received the minimum wage for one hour daily in the school cafeteria. All 20 students spent from two to four hours on class catering projects. Students worked as many as 560 hours during the school year and as few as 18, earning from $10 to $728.

Follow-Up Study

Seventeen of the 20 students in the class were sophomores or juniors at the time of the study and therefore did not seek permanent jobs. Follow-up information received from the students indicated that eight girls wanted summer jobs but were unable to get them because of age, transportation problems, or lack of experience. One student attended summer school; one did not want to work. Two students worked at home helping with painting and other chores. One student babysat for 12 hours a week at $.50 an hour; another worked for two weeks as assistant cook at a camp, earning $30 for a 63-hour work week. Two students earned the minumum wage, one as waitress in a nursing home for 24-50 hours a week and a boy as full time baker's assistant in a hospital.

The juniors were rated by their employers from 3.43 to 4.22, with 5.00 being the highest possible score and 3.00 representing a minimum standard of employability. The juniors rated their jobs at 3.14 to 4.67 according to the job satisfaction scale, "My Job." The students said they liked getting experience and "learning how to bake from a very good baker"; problems on their jobs were low pay, inconvenient hours, transportation, and having to help clean up.

Two seniors obtained jobs after graduation while the third senior in the class attended business school. The senior boy changed from his food service job to factory work, then to route salesman for a dairy, and was later drafted into military service. A senior girl worked at $1.30 an hour as packager for a greeting card company, then changed to a job as diet aide in a hospital where she was paid $1.51 an hour for a forty-hour week. The senior students received employer ratings near 3.50 and rated their jobs higher, at 4.17. One senior, happy with her second job, said she had been pushed too hard in her first one.

Class Two

Index of Success

The concordance coefficient for the index of success for this class did not reach the criterion .05 level of significance and the index was therefore an inappropriate measure of student progress for this atypical class of ninth grade students.

Pretest and Posttest Scores

Teacher ratings on the Becoming Employable, Sanitation, and Safety descriptive rating scales went up significantly with post-scores on the Sanitation rating scale showing the most progress at the .02 level of significance, Safety at .05 and Becoming Employable at .08, according to the Wilcoxon signed-ranks test. Self-ratings by students did not change significantly.

Student Interviews

Students in the ninth grade class, Home Economics 14, found most helpful learning about sanitation, food preparation, nutrition, grooming, manners, how to make friends, and kinds of jobs available for young people. The girls could suggest little to improve the course, perhaps because of their limited experience. One girl did recommend that more grooming, cooking, garnishing, and supervised work experience be included in the course.

Five of the girls felt ready, even with their introductory class, to take jobs in food service; four did not feel prepared and two said they thought they would be ready after having a little more experience. The students were most interested in waitress and diet aide jobs in the food service area; one preferred cafeteria work because it seemed easier and two preferred factory or sales work. The girls in the class did not seem to be as satisfied with their course as other classes in the sample; at the time of the interviews just two had recommended the course to others.

The young students had formulated few plans for their future. One girl thought she might like to be a secretary, one a waitress, and another a beautician. Three girls wanted to work in hospitals as nurses or nurse's aides. Most of the girls had no problems on the jobs they held, but two had had employers who made improper advances and two said they were made to work too hard.

Work Experience

Supervised work experience for these young students consisted mostly of class projects for which students were not paid. At the time of the interviews one girl worked in a restuarant, two occasionally in a luncheonette, and two were employed by the school as foods laboratory assistants. All the above were paid $1.00 an hour. One student worked in a lamp factory; three were babysitters. The teacher reported at the end of the year that the students worked from 40-600 hours on class projects. The lab assistants worked 160-210 hours and one food service countergirl worked 45 hours at the minimum wage. The factory employee worked 720 hours at $1.60 an hour.

Follow-Up Study

Seven girls wanted summer jobs other than occasional babysitting but could not get them because of age or because they were needed at home. One girl did not want to work. The factory worker continued at her job; another girl worked as a factory assembler for a few days but did not like the job. One student earned $1.00 an hour babysitting for a family 15 hours a week.

The lamp factory worker received an employer's rating of 4.54 and in turn rated her job at 3.65. The babysitters rated their jobs at 3.82 - 4.22. The factory worker liked her pay but said the work was dirty and there were not enough rest breaks. Most of the girls found age a problem in securing desirable jobs.

Class Three

Index of Success

An index of success was compiled for this small Home Economics 13 class, in the same manner as for other classes in the sample which included teacher ratings on the four general descriptive rating scales and student scores on the Attitudes Toward Work scale and food service achievement test. Teacher ratings on scales specific to food service classes were not available since this teacher did not rate students on any of the scales measuring specific food service skills such as cook's helper or waitress. No relationship was found between the index compiled to measure student progress and either student characteristics or scores measuring motivation for enrollment.

Pretest and Posttest Scores

No significant changes were found between pretest and posttest scores for this class. Gains in scores on the Self-Confidence scale approached the level of significance set as the cut-off point, .10. Because of the small number of students in the class, relatively large changes in scores were required for statistical significance.

Student Interviews

Simple food preparation in the school cafeteria and learning about sanitation were the most helpful features of their course, according to interview responses of the small food service class. Suggestions for making the class more meaningful included work experience outside the school, more food preparation, and more cafeteria experience. The students wished to have more practical experience both in school and out, and less theory.

Two students found their extensive background in home economics helpful; two thought they could have succeeded in the class with less background. Two felt prepared for entry-level jobs in food service both at the time of the interviews and at later periods in their lives, one gave a qualified answer, and one said she did not feel prepared because of lack of experience.

Three students said that in the food service area they were most interested in cafeteria jobs because they could stay in one place and were not crowded. One girl preferred work as a soda fountain clerk or waitress so she could meet people. Two girls recommended the course to others, two did not.

Three girls, after graduation, hoped to continue their education, in practical nursing or cosmetology; one girl wanted to work in a restaurant or store.

Work Experience

At the time of the interviews three of the girls were working in the school cafeteria for their lunch. One girl also babysat at $.50 an hour. A fourth girl in the class worked as a nurse's aide at $1.00 an hour. All four thought work experience should be part of an occupational education course but working in the school cafeteria was not popular with the girls. One said that she didn't need work experience to wash dishes in the cafeteria; another said, "Only poor kids work for their lunch." By the end of the year, according to the teacher's report, the girls had had from 9 - 51 hours of work at a variety of jobs in the school cafeteria.

Follow-Up Study

Just two of the four seniors in the class responded to follow-up communications. One girl enrolled in a junior college in Florida; another student first worked fulltime at an office filing job for $1.30 an hour and then changed to work 15-28 hours a week as cashier in a food market for $1.50 an hour. The cashier rated her job at 3.22 and liked the experience but not the low pay.

Class Four

Index of Success

The pretest score on the concept of Self in the World of Work scale was related at the .01 level to success in this food service class taught in a suburban-urban area near New York City. Three variables found significantly related at the .05 level were: total hours of work experience; Attitude toward Home Economics, post-score; and Self-Confidence, post-score.

Pretest and Posttest Scores

Posttest scores rose significantly over pretest scores on the following instruments: food service achievement test, Attitudes Toward Work, Self-Confidence, Expectations from the Course, Interest in Occupational Training, and Attitude Toward Home Economics. All six posttest scores represented highly significant gains, Table 6. Teacher ratings on the Safety descriptive rating scale showed significant positive changes; students rated their skills as measured by the Becoming Employable and Management descriptive rating scales significantly higher in the spring than in the pre-ratings, at .04 and .02.

Student Interviews

Students in this food service class found most helpful learning about jobs and employers, practice at school "in what I did later on the job" learning to operate commercial equipment, to portion, to be a good waitress, to set up trays for sick people, to deal with people, about foods, sanitation, safety in handling food at home and on the job, "getting and having a job and staying in school," and "training for the job I'm doing and holding it".

When asked what could be even more helpful three said more cooking and garnishing, two girls suggested more field trips to commercial kitchens and institutions for further training, and additional sections of the class so more students could enroll. One student each mentioned having a job sooner, better pay, more hours of work, more discussions, and more beginning instruction for a particular job. Five students could think of no way to improve the class.

Eight of the ten girls found their strong background in home economics helpful, two thought the occupational course could be self-sufficient. All felt prepared for entry-level jobs in food service both at the time of the interviews and at later periods in their lives, although one girl wanted more part-time experience before taking a full-time food service job.

Three girls preferred waitress jobs to other food service jobs, two wanted supervisory positions, five chose serving jobs either at the counter or steam table, and one liked diet aide jobs. Two girls did not have specific choices. Reasons for selecting the jobs they did were feeling competent to handle the jobs and liking them. Girls who chose supervisory jobs did so because they saw opportunity and chance for advancement there. Seven girls had had occasion to recommend the course to others; three had not.

Most of the ten girls hoped to go on, after graduation, for further education. Three wanted to go to business school, two to two-year technical institutes in the State University of New York, and one was undecided between further training in business or food service. Two girls wanted to become licensed practical nurses and one to be a social worker. One girl wanted, after graduation, to work for the telephone company or in an office.

Work Experience

All ten girls had outside work experience related to food service during the course. All ten had help from the school in getting their jobs, usually from the teacher of the class. All received at least the minimum wage, $1.25 an hour at that time; all approved outside work experience as part of an occupational education course.

Securing transportation was a problem for five girls. Other problems on the job were the low pay, having to work too hard and too fast, unsanitary commercial kitchens, finding working on weekends a hindrance to social life, confusing directions, changing shift times, early hours, and complaints from the public ("but I have learned not to let it bother me").

At the end of the year the teacher reported that the ten girls had had from 30 - 361 hours of outside work experience in food service, with seven of the students having 200 or more hours of such experience. The girls earned from $39. to $448 during the school year, with the mean at $281. Eight of the girls earned one-half unit of school credit for their outside work experience. The girls sampled a variety of jobs; at some time during the school year six were tray girls in hospitals, four were cook's helpers, one was a waitress, five were counter girls, and one was a salad girl.

Follow-Up Study

Employer ratings received for five of the girls were all at the 4.00 level. All but one of the girls returned their job satisfaction scales; most rated their jobs at the 4.00 level, one at 3.43, and two slightly below 3.00. Since the girls in the class were all juniors they did not seek permanent jobs. Seven girls started the summer as tray girls or dietary aides in hospitals for 25-32 hours a week at $1.25 - 1.35 an hour; four changed to jobs in a college cafeteria or snack bars for the same hourly pay because of better working hours. Two other girls earned the minimum wage for 25 hours a week in a college cafeteria; one worked in a laundry. Most of the girls liked the type of work they were doing. One girl wrote, "It's not too hard to do and no one tries to make it harder for you." Another student wrote, "I love the training itself because you can be almost anything with the background of food service," and still another, "I like the group cooperation; I enjoy working with people."

Two girls said that they had too many bosses on their jobs; one each listed as problems on the job incompetent coworkers, working in the same spot all the time and never changing, transportation and working every weekend.

Class Five

Index of Success

The index of success for the food service class in a small central New York city was found to be related to numerical competence; Attitude Toward School, spring scores, and Self-Confidence as measured by the fall score.

Pretest and Posttest Scores

Post-scores for four tests made significant gains over the period of the year: food service achievement test, Self-Confidence, Interest in Occupational Training, and Concept of Self in the World of Work. Teacher ratings on the four general descriptive rating scales also made gains at a high level of significance: Becoming Employable, Management, Safety, and Sanitation. Student self-ratings did not change significantly, Table 7.

Student Interviews

At the time of the spring interviews half the class listed factors related to outside work experience as the most helpful part of the course: the actual on-the-job training, learning to work with others, and dealing with the public. Another popular feature of the course was learning large quantity food preparation techniques. Mentioned less often were learning about nutrition, food storage, and the fine points of waiting on table.

Students were asked to suggest additional learning experiences which could be helpful in an occupational course. Four students felt that longer class periods were desirable. Other replies included more work on meat cookery, appetizers, and special diets, more work with commercial equipment, more on getting along with others, and more jobs earlier in the course.

All the students interviewed felt that their home economics background had been a good preparation for the occupational home economics class and most thought the courses they had had should be required for enrollment in the food service class. All eight students said they felt prepared for entry-level jobs in food service.

The seven girls in the class said they preferred waitress jobs; three regarded as alternatives dietary aide, snack bar or catering jobs. The boy in the class chose short order cook as his favorite entry-level job in food service and saw it as a "good place to start and work up." The girls chose their jobs because they liked them and enjoyed meeting and serving people.

Six students had recommended the course to others; two had not. After graduation two girls wanted to be airline stewardesses, two to be licensed practical nurses, one to go on for religious training, one to work as waitress or saleslady, and one was undecided. The boy enrolled in the course expected to work on the family farm.

Work Experience

All eight students liked outside work experience "so the student knows what to expect later on the job". Five had worked at outside food service jobs at the time of the interviews. Only one student had problems on the job and that was difficulty keeping up his studies along with the many hours he worked on the family farm. The students who wished to work did not have trouble getting jobs because of the help in making the initial contacts which they had from their home economics or distributive education teacher.

At the end of the year the teacher reported that all the girls had outside work experience which was related to their food service course. This type of work experience accounted for a minimum of 17 hours for one girl and a maximum of 1,753 for another. Three girls worked approximately 35 hours in food service jobs for outside employers; one worked 98 hours; one, 186 hours, and one 420 hours. The lone boy in the class had too heavy responsibilities at home to work at a food service job. All students worked on class catering projects to earn money for field trips to fine restaurants. All students, except the boy, had during the course a total of at least 33 hours of work experience, paid or unpaid, related to professional food service. Two girls worked also at jobs unrelated to food service but related to other areas of home economics. Work experiences contributing to student progress in the course were as waitresses, cook's helpers, cafeteria countergirls, hostess, and cashier. Money earned by the students over the school year varied from $25.40 - $2,205. The girls received the minimum wage except for work in the school cafeteria, where lunch was considered part of their pay. The seven students in the class who had work experience related to food service received from one-half to one unit of extra school credit.

Follow-Up Study

Six seniors were enrolled in the food service class. After graduation two students worked for family enterprises, the one boy in the class on the family farm and one girl in her family's restaurant at $1.50 an hour. One student enrolled in a school for airline hostesses but soon returned home and accepted a job as waitress at $1.32 an hour in a well-known restaurant, part of a nationwide chain. One girl went to Germany with her husband who was in military service, after working unsuccessfully as companion to an elderly woman. One student was working for $1.50 an hour at the close of the follow-up study as a nurse's aide in a reconstruction home specializing in physical therapy, and another as cashier in a supermarket at the minimum wage of $1.25.

Of the two juniors, one returned to the class for a second year's experience for which she received school credit. The second junior quickly obtained a summer job she enjoyed as countergirl in a New York City snack bar, saying she was immediately hired when she told the management about her training in the occupational course.

Employer ratings received from four employers rated three of the girls from 3.36 - 5.00. One worker was rated at 1.89 and was unable to keep her job in a hospital, but was later successful in holding a job. Six students returned their job satisfaction scales, all rating their jobs near 4.00 or considerably above.

Class Six

Index of Success

The index of success for this urban-suburban community near New York City correlated at high levels of significance with current academic average and post-score on the Attitude toward Working with Others scale (.05), and the fall score showing Expectations from the Course (.01). Exact values of the correlations are shown in Table 5.

Pretest and Posttest Scores

Students made highly significant gains in posttest scores on the food service achievement test as compared with their pretest scores, Table 6. Post-scores on the Becoming Employable descriptive rating scale were significantly higher when rated by either the teacher or the students themselves.

Student Interviews

According to six students, the most valuable feature of this food service class was the training received in the faculty restaurant; learning about sanitation was considered by three students as especially helpful, and food preparation by two. Use of commercial equipment, basic health, types of diets, and "freedom--not so many tests" were regarded by one student each as particularly helpful. When students were asked how the course could be improved five said potential students should be more carefully screened against disruptive influences; three students should have liked more quantity cookery. Two students thought they would learn faster with more outside work experience earlier in the course and two would have liked to learn more about how to run and organize a restaurant or hotel. Suggestions for improvement made once each were more publicity, expansion of the course to a two-year program, more work with the deep fryer, more practice waiting on table, more resource people and field trips, more restaurant equipment, and a second teacher to lighten the load. None of the ten students had background courses in home economics prior to the course, but all ten felt basic food courses should be required for enrollment in the occupational class.

Nine of the ten felt prepared for entry-level jobs in food service both at the time of the interviews and at later periods in their lives. The number of different jobs chosen as preferred occupations in food service showed the variety of experiences the class had offered its students. Three chose food preparation, one counterwork, one cashiering, two waiter/waitress, one grill cooking, one dietary aide, and two "liked it all." Reasons for selecting particular jobs included liking to work with food, finding the job varied and interesting, and liking to serve people. Three students, after having varied experience in entry-level jobs, selected certain jobs because they felt more competent and less nervous in them. Nine students had recommended the course to others at the time of the interviews.

Three students expected after graduation to go directly into food service jobs; one wanted additional professional training in food service. Three other students expected to go on to college to major in business administration or elementary teaching. One student thought he would work with his father, an electrical contractor; two were undecided about what they would do.

Work Experience

Six students were working at the time of the interviews and two others had had outside work experience during the year. Four of the jobs were related to food service; all had received at least the minimum wage. None of the students had problems on the job except a telephone operater who felt she was poorly treated by the management. None of the students had trouble finding jobs; four said the school had helped them get jobs through the STEP program, distributive education, or their food service teacher. All students endorsed outside work experience as part of an occupational education course.

Follow-Up Study

Three of the senior students took clerical jobs after graduation, one in a foods supermarket, earning at least $1.50 an hour; one worked for a furrier for $1.35. Three seniors held jobs in restaurants during the period of the follow-up study, one during the summer prior to college entrance, and another prior to military service. A senior girl also earning $1.50 an hour worked for a microfilming company but left her job when she married. The clerk in the food supermarket earned $1.83 an hour and also held another job as mailboy for an airline for a total of 55 hours a week; a clerk truckdriver also worked 55 hours a week. Of the restaurant workers, the counterman earned $1.15 plus tips and the kitchen helper $1.30, for 35-40 hours a week; the dishwasher/busboy worked 35 hours at $1.50.

The two junior boys attended summer school. One boy also held a job for $1.35 an hour 28 hours a week as stock boy for a department store; he did not like the job and changed at the end of the summer to a job in a machine shop.

Employer ratings were received for seven of the nine students who held jobs, Table 9. The food service workers received ratings of 2.73 - 4.73. Students working at other jobs had ratings of 2.83 - 4.30. The students rated their jobs from 3.46 to 5.00. They liked their jobs and had few problems except too much dishwashing and wanting more hours of work. The furrier's helper found his job boring and was looking for work in food service.

Class Seven

Index of Success

The class in food service taught in a suburb of Buffalo was found to have the following variables related to its index of success: spring scores for Self-Confidence and Attitude Toward Working with Others, pretest score on the Concept of Self in the World of Work scale, and SES. The correlation between the index and self-confidence was at the .01 level of significance and the others at .05.

Pretest and Posttest Scores

Significant differences in pretest and posttest scores for this class included positive changes in Concept of Self in the World of Work and Attitude Toward Occupational Training, at high levels of significance, and negative changes in Married Women Working, Attitudes Toward Work, and Attitude Toward Type Job (food service). Student skills as measured by post-teacher ratings on the general descriptive rating scales rose significantly for the Becoming Employable, Management and Sanitation scales. Student self-ratings concurred in the case of the Becoming Employable scale, Table 7.

Student Interviews

This articulate class found many features of their course helpful. Six girls spoke of their outside work experience, referring both to the actual training and the opportunity for learning to understand older people, that is, anyone older than they. A typical remark was, "We studied a lot and did things in class, but nothing is like the real work. Nothing." One girl pointed out the value of getting experience in class, then going out on the job knowing what to expect. Five girls found learning waitress skills meaningful; four mentioned field trips. Three girls liked cooking and two favored class discussions. One girl said that by listening to the others in the class she could see how the poor attitudes of some hindered them on the job or in getting a job. Helpful features brought out once each in the interviews were learning food storage, safety, how to write checks, special diets, body mechanics, orientation to work, care of utensils, and the stress on appearance.

When pressed for suggestions for making the classes even more meaningful, six girls said class periods should be longer and seven said they preferred activity--cooking, demonstrations, field trips--to lectures. Responses from two girls each were: larger and separate room, more restaurant-type equipment, more outside work experience, more grill cooking, and more simulated work experience practicing such jobs as short order cook. Suggestions made once each were to learn how to be a cashier, better cooperation from the class, bigger budget for more activities, boys in the course, and to learn to run dish machines.

Seven girls found their background courses in home economics suitable preparation for an occupational education course. Two girls thought the background courses could be better-tailored as preparation for occupational home economics; another said there was no real preparation for such a different course. Five girls said fewer courses should be required for enrollment in the class since heavy prerequisites tended to exclude boys who they thought would benefit from the class; others felt the course would be difficult for students without some foods background.

All ten students felt prepared for entry-level jobs in food service at the time of the interviews and all said they felt adequately prepared to return to food service jobs at later periods in their lives in case they left the labor market to marry and raise their families, although one girl said she would prefer to return to a refresher course first. Three girls selected as their preferred food service jobs work in hospitals: as dietary aide, cafeteria countergirl, or snack bar worker. Two girls chose hostess jobs; one liked cashiering but said she would rather be the manager. Three girls favored waitress jobs, with two listing food preparation such as salad girl as equally desirable. One student preferred grill work. Waitress or hostess jobs were chosen because the girls liked being around people, serving people, meeting new people, and constant activity. Cooking was favored because the back of the house is less formal and the girls knew how to cook well and enjoyed doing so. Three girls chose hospital jobs because they have worked there, got along well, and enjoyed the work. Grill work was selected for its better pay and fewer physical demands. Being manager seemed like an interesting job to one student.

Nine girls, at the time of the interviews, had recommended the course to others. One girl said, "My friends keep saying they want a job. The best way to get one is to take this course."

Three students hoped to continue their education immediately upon graduation in business school or airlines school. Five planned to work for a while as diet aides, waitresses, or in office work and then go to school or to go to night school to become licensed practical nurses, a hotel manager, IBM operator, or secretary. One girl planned to marry and to go with her husband in military service; one expected to go directly into office work. All the girls endorsed supervised work experience. Seven girls had had food service jobs at the time of the interviews and two others had outside jobs--all earning at least the minimum wage. One student worked at babysitting jobs; four girls said they had trouble getting jobs. One, the babysitter, said her age was a problem and, also, she didn't want to work in a hospital or nursing home. Nine of the girls had school help, mostly from their occupational home economics teacher, in getting jobs. Problems encountered on the job were as extensive as the work experience the girls in this class had and were: figuring the tax on checks, wanting more hours of work than were available, annoyance with incompetent co-workers, having to work holidays, too many bosses, having to stay late sometimes to finish, transportation, finding the employee's section of restaurant dirty, and improper advances from the employer. The girl holding an office job found her work lonesome and boring. The problems listed were mentioned once except for the problems of multiple bosses and incompetent co-workers, mentioned twice.

Comments of interest made during the interviews were: "I thought about dropping out of school, but knew better. The senior year gets boring; everything seems so routine. Need something different. This course is different. If I hadn't taken this course it really would have been bad," and "Home economics teachers take a personal interest in the kids where other teachers don't."

Follow-Up Study

One junior in the class worked over the summer as a tray girl in a large hospital, at the minimum wage for 15 - 20 hours a week, as many hours as she wanted. She continued in the job during her senior year. The second junior left school during her senior year to be with her husband who was in military service. She later worked as grill cook.

Four seniors took food service jobs right after graduation: two as short order cook at a department store snack bar, and one as counter girl in a delicatessen. One senior worked in a factory and another as office clerk in a hospital. One student did not like food service work and held a job as cashier in a food market for a time but was unemployed when the store closed; one student worked as a file clerk. All the girls earned at least the minimum wage, with the factory worker the highest paid at $2.08 an hour.

Employer ratings were received for six of the ten girls. The delicatessen counter girl and factory worker received the lowest rating, 2.90 and 3.10 respectively; the short order cook and hospital grill girl received the highest ratings of 4.18 and 4.20. Six girls returned their job satisfaction scales, rating their jobs from 3.54 to 4.35 except for the delicatessen worker who rated her job at 2.52. The delicatessen countergirl had liked a job she held for some time in a restaurant but had left the restaurant for part-time work when she married. She was unhappy with her last job because the employer was short-handed and she had to work seven days a week, sometimes until midnight.

The girls wrote that things they liked about their jobs were friendly co-workers, meeting new people, being close to hospital patients and learning special diets, and ease of job. Their problems included having to work occasional weekends and holidays without extra pay, not enough hours of work available, transportation, belonging to unions without getting better pay or benefits they considered to be worthwhile, too many bosses, and lack of confidence in the management.

Class Eight

Index of Success

The index of success for this Home Economics 14 class of less-able younger students was found significantly related to reading ability, current academic average, and the attitude toward working with others that girls brought into the class with them in the fall. The course closely approximated a Home Economics 13 class and the index was compiled from Attitudes Toward Work and food service achievement test scores, teacher-ratings on the four general descriptive rating scales and an average of ratings on four scales specific to food service: Waitress, Cook's Helper, Short Order Cook, and Family Meal Specialist.

Pretest and Posttest Scores

Posttest scores for the class rose at a high level of significance for the food service achievement test and teacher ratings on the four general descriptive rating scales: Becoming Employable, Management, Safety, and Sanitation. Student self-ratings agreed with their teacher in the cases of the Becoming Employable and Management scales, Tables 6 and 7.

Student Interviews

According to the interview responses six girls found laboratory experiences in class the most helpful part of their Home Economics 14 course; seven found the paid work experience most valuable: "learning to go out on our own" and "knowing what to expect." Two girls said they enjoyed everything and thought every girl should have the course. One student appreciated most the conferences with her teacher "to build up my confidence"; another, an underachiever of considerable ability, said, "Before I came here I was going to quit school but this gives you a whole new outlook." Other factors mentioned once each were learning to become employable, sanitation, working with people, and being paid.

Eight girls thought the course could be improved still further by additional outside work experience; five would prefer more activity in class--especially more practice in waitress and countergirl skills--to lectures. Two students thought the course could be more challenging; one felt two credits should be given for a two-period class. One student regretted that baby care was not included in the class; plans had originally been made to explore both food service and child care jobs.

At the time of the interviews nine girls felt prepared for entry-level food service jobs, two did not feel ready, and one was undecided. Nine felt they could handle food service jobs at later periods in their lives on the basis of what they had learned in class, two were not sure, and one did not yet feel sufficiently well-trained.

Six students chose waitress or hostess jobs as their favorite food service jobs because they liked to meet people and felt prepared for the job. One girl best-enjoyed cooking; another, cake-decorating. One student liked working with the cash register; another selected dietary aide as the food service job closest to her first choice, nursing. One student preferred a dietician's job because it was more challenging and required special training.

Eight of the girls had recommended the course to others. Eight hoped for additional training after graduation to prepare them for jobs as dietician, cake decorator, beautician, airline hostess, laboratory technician, secretary, and nurse. One wanted to go directly into sales, another to be a cashier. One, an orphan herself, hoped to work in the New York City Foundling Home.

At the time of the interviews nine of the girls, because of their age, worked only on class catering projects for which they received $1.00 an hour. Three had additional work experience: in a nursing home, as cashier, and caterer's assistant. Five girls had trouble getting jobs because of their age; the others worked as much as they wanted to. They had few problems on the job since most of their work was supervised by their teachers. One girl said transportation was a problem; another thought the work could be divided more evenly but found her co-workers pleasant. Working the late shift was hard for the cashier in a bakery; the students working in a nursing home said the patients were sometimes difficult. All 12 girls in the class endorsed work experience as an opportunity to build confidence, explore different types of jobs, and earn money.

Work Experience

By the end of the year seven of the young students had had from 5-38 hours of outside work experience related to food service.

All but one of the girls had worked on class catering projects for which they received $1.00 an hour. All the class had at least 40 hours of unpaid professional experience working on catering projects as a group. Five girls had worked for many hours for outside employers as babysitters. When all types of work experience were totalled the girls were found to have earned, during the course of the school year, from $8-463.

Follow-Up Study

Five girls looked for summer jobs but were not able to get them because of their age; four students did not wish to work. One student worked as cashier at a market 25-30 hours a week at the minimum wage; another continued with her nurse's aide duties in a nursing home, earning $1.35 an hour for 35 hours a week. The twelfth student did not respond to follow-up communications.

One employer rating was received, 2.64 for the nurse's aide. The two students who worked rated their jobs at 3.00 and 3.22. They enjoyed the new experience and the money they were able to earn. The nurse's aide would have liked more hours of work a week.

Class Nine

Index of Success

The food service course offered in an affluent suburb of the Triple Cities area of New York State was found to have an index of success related significantly to one variable, the post-scores on the Expectations from the Course scale.

Pretest and Posttest Scores

Three posttest scores, Married Women Working, Interest in Occupational Training, and Concept of Self in the World of Work, made significant gains, the first two scores at .02 level of significance and the last at .08. Teacher rating for the four general descriptive rating scales showed post-scores approaching significance for the Becoming Employable and Management scales. Self-ratings by students did not change significantly, Tables 6 and 7.

Student Interviews

Two of the seven students in the class found field trips to restaurants and institutions for further education the most helpful feature of their occupational education class, another two valued class experiences in cooking and catering. Single responses included learning to operate restaurant-type equipment, orientation to work, increased self-confidence and self-respect, learning to get along with people, and appreciation for the informality of a class which was active and never boring.

Suggestions for strengthening the course made by three girls each were the obtaining of outside jobs sooner, more food preparation and catering in class, wider use of textbooks, and more homework. Two girls felt the class could be scheduled earlier in the day so students could work more hours without missing the class itself. Two girls who had outside work experience said the course should cover more work relevant to their jobs, that there were things they had had to learn on the job that could have been learned in class. Other ideas submitted by two students were for longer class periods and more up-to-date and comprehensive movies. Responses heard once were: the use of more resource people, availability of professional food service magazines, addition of nurse's aide and child care occupational courses for those who do not like food service and more field trips. One girl pointed out the advantage of earlier planning for enrollment in occupational courses, taking required courses earlier so students could work more hours as seniors. She also thought students should enroll in Home Economics 13 by tenth or eleventh grade since it seemed to take one semester to find a job. Students could then, she said, move into better jobs by their senior year and the reporting back to class about a wider variety of jobs would help students choose occupations for which they were best suited.

All girls in the class had a strong background in home economics although two would have liked even more work in foods prior to the course. Two students did not think that three years of home economics background should be required for enrollment in the occupational class; the other five did, however.

Two students, already working, weren't sure they felt adequately trained at the time of the interview for an entry-level food service job and two did not feel adequately prepared for food service jobs at later periods in their lives if taking such jobs seemed the right thing to do.

When asked which food service jobs they preferred the girls chose short order cook, stewardess, waitress, cook-manager of a cafeteria, dietician, working with the food, and hostess, with each type of job selected once. Reasons for making their selections were liking to be with people, wanting to help others, feeling competent to do the job, and finding the job interesting and challenging. One girl had recommended the course to others at the time of the interviews.

Three girls had immediate plans for working at food service jobs as short order cook or waitress. Two students expected to become nurse's aides; two were undecided. Three students hoped someday to get additional training as practical nurses or beauticians.

Work Experience

At the time of the interviews all the girls were earning the minimum wage, five in food service jobs. Five girls had no problems on their jobs. One, who worked as nurse's aide, did not like working 8-12 days without a day off or working the 3:00 to 11:30 shift at night. One girl was disappointed to just wash dishes at first on her job. All but one of the girls liked work experience as part of an occupational course; another, who worked nearly 400 hours, wasn't sure since she'd had trouble scheduling her classes.

The teacher's final report on work experience for the class showed that seven girls in the class had worked from 69 - 386 hours during the course for which they earned at least $90., with a maximum of $482. Two girls received an extra one-half unit of school credit, since they had nearly 400 hours of work experience. By the end of the year six students had worked as cook's helpers, both in the school cafeteria and in outside jobs. The largest share of the work experience students had was in the school cafeteria, where they received the minimum wage.

Follow-Up Study

Two of the seven girls did not respond to follow-up communications. Of the remaining five, two held food service jobs at a nationally franchised drivein, one as assistant manager; one student was a nurses's aide in a large hospital; one was clerk-bookkeeper for a loan company; and another held a factory job. All girls in the class were seniors at the time of the study and sought permanent jobs.

Employer's ratings were received for three of the girls which rated them from 2.45 - 4.36. Four girls returned job satisfaction scales, rating their jobs from 3.48 to 4.78. The girl with the lowest employer rating was earning the largest hourly wage, $1.80. All were earning more than the minimum wage at the close of the follow-up study in December. Just one girl said she had a problem with her job; she worked for 25-30 hours a week and wished to work fulltime.

Class Ten

Index of Student Success

This child care class taught in a local high school on Long Island had many variables associated with the index of success. Current academic average correlated at the .01 level of significance and numerical competence, units of vocational education, interest in occupational training, attitude toward school, self-confidence, and attitude toward working with others at .05. Spring scores were represented for the four instruments which were administered to the sample twice except for the self-confidence measure which was a pretest score, Table 5.

Pretest and Posttest Scores

Posttest gains for this class reached statistical significance for the child care achievement test and Attitude Toward Home Economics scale, and for teacher ratings on the Becoming Employable, Management, and Sanitation scales. Changes in student self-ratings did not reach the criterion level of significance set for the study, Tables 6 and 7.

Student Interviews

The feature found most helpful by four students in the class, according to interview responses, was better understanding of children's behavior. Three liked employment preparation: learning how to apply for a job, how to act on a job interview, to get along with people. Mentioned once each were the discussions of toys and children's food, first aid, and childhood diseases. Nine girls said the course would be more meaningful if there were more opportunity to work with children, in particular children with special needs. Three girls found the subject matter repetitive from earlier classes. Suggestions made once each were for more visits from employers, use of a textbook, and more field trips.

Most of the girls had a strong background in home economics which they found helpful in the occupational class, especially child care, management, and foods. Eight girls felt sufficiently well-trained to handle a child care aide job, three did not. One girl said she felt adequately trained but did not want such a job; another said child care jobs did not pay well enough. The three who did not feel competent to hold child care aide jobs indicated a need for experience first.

In the area of child care five of the girls preferred nursery school jobs, one wanted to be a kindergarten teacher, one to work in summer camps, one with children in a hospital, and one with disturbed children. One girl did not like child care jobs and wanted a sales job where she could meet more people. After graduation two of the girls expected to continue with jobs they already had, two hoped to get secretarial jobs, one hoped for employment as a nurse's aide. Two expected to work at any type of job they could get. Four girls hoped to go on for further training as dental assistant, airline hostess, nurse and beautician.

Work Experience

At the time of spring interviews 10 of the 11 senior girls were working, although three were babysitting irregularly at $1.00 an hour or less. One girl had just left her job as a meat wrapper because of improper advances made by her employer. Three girls held jobs in factories, one was a nurse's aide, and another worked in a department store as saleslady. One girl, who had been a diet aide, had moved into a new office job at $1.85 an hour.

According to the teacher's end-of-year report on work experience two girls in this class did not secure regular jobs during the school year; others worked from 21 - 684 hours for which they earned from $26.-855. No school credit was given for work experience.

Five girls worked in jobs related to their child care course, two as dietary aides in the children's ward of a hospital and three as aides to kindergarten teachers. Four others had outside paid work experience in clerical or factory work or as nurse's aides. Three of the girls working as child care aides held supplementary jobs in factory and clerical work and food service. Most of the work experience for this class was paid outside work experience not directly related to the child care class chosen at least partly because child care jobs did not pay as well.

Follow-Up Study

None of the girls in this child care class who responded to follow-up communications was working at a job related to the course by the close of the follow-up study in December. Two girls in the class of senior girls went on for further training, one as dental assistant and another to business school. After training, the dental assistant quickly obtained a job with which she was very pleased. One student continued her job as ward attendant at a State hospital for 40 hours a week at $2.02 an hour. Another student worked full-time as a waitress at $1.50 an hour, later changed to a sales job at $1.35. A third girl held a factory job at $1.50 an hour. One student, who continued in school for another year, did not work over the summer; one, unemployed during the course, was still unemployed at the end of the study. Four girls did not reply to the series of cards, letters, and questionnaires they received as part of the follow-up study.

Employer ratings, received for two of the girls, rated the ward attendant at 3.64 and the salesclerk at 4.27. Three of the girls returned the job satisfaction scale, "My Job", rating their jobs from 2.70 for the factory worker to 4.17 for the sales clerk. The girls liked meeting new people and in one case "the feeling of helping my patients and helping in their cure." The salesclerk disliked having to rush sometimes; the factory worker wanted to change to another type job. One girl would have preferred to be in college rather than working for it.

Class Eleven

Index of Success

One variable was found significantly correlated with the index of success for the small child care class taught in an area vocational school located in an urban center of central New York State. The spring scores for Expectations from the Course was found related to success in this occupational class, at the .05 level of significance.

Pretest and Posttest Scores

Posttest scores for Attitude toward Working with Others and Attitude Toward Home Economics rose significantly over pre-scores. Neither teacher ratings nor student self-ratings on the four descriptive rating scales measuring general employability showed significant changes, Tables 6 and 7.

Student Interviews

All five students found the nursery school held in conjunction with their class a helpful feature since it provided opportunity for observing and practicing child guidance principles and learning what to expect from children of various ages. The five students also valued first aid training. Two students appreciated learning about children's diseases and one said learning about home nursing and general health was helpful. Three of the students thought more first aid training would be useful; three would expand the course to include study of a greater variety of children: infants, handicapped, and older children. Three girls would have liked more time to discuss the nursery school children with their occupational home economics teacher. Suggestions were also made for more equipment, more room, more work on safety, and wider use of textbooks. One girl felt the class should be taught how to apply for a job.

The girls had had little home economics background and did not feel basic courses in home economics should be required for enrollment in their class. Four girls felt ready both at present and at later periods in their lives for entry-level child care jobs. Four girls chose as their preferred job in child care work with children in hospitals, with two of the four giving work as nursery school aide as an equally desirable alternative. One girl wished to work with the handicapped because "they need the help the most." The girls also chose hospital work because they felt the children needed attention and care. Impressions received on field trips to hospitals contributed to this feeling. Work in nursery schools was chosen as presenting opportunities for working with a variety of children. Four girls recommended the course to others.

One student hoped, after graduation, to go to business school, two for training as nursery school teachers, one as social worker, and one as a child psychologist.

Work Experience

At the time of the interviews none of the girls was receiving the minimum wage. Four worked at babysitting and odd jobs; one, in an ice cream store. Problems related to work experience included having to learn everything on the job, lack of confidence and wanting more work; two girls had no problems on the job. Three girls could not find jobs other than baby-sitting; all thought supervised work experience should be a part of their course because as one said, "without it we haven't got anything."

The teacher's end-of-the-year report on work experience showed each girl having from 106 - 136 hours experience as nursery school aides helping with games, art and music activities, stories, and refreshments. Students were not paid for this participation which was considered an essential part of their training.

Follow-Up Study

The five girls in the class were juniors who returned to school in the fall. Their summer jobs included babysitting for neighbors at $.50 - .75 an hour, clerking in an ice cream store at $1.30 an hour for 12-20 hours a week, and work at the minimum wage in a day care center operated by the Office of Economics Opportunity. One girl did not wish to work and one did not respond to follow-up communications.

Employer ratings and job satisfaction scales were received for two of the girls. The babysitter received an employer rating of 4.00 and rated her job at 4.35. The day care center aide received a high employer rating of 4.45 and rated her job at 4.17. The girls who had jobs working with children all enjoyed their work because of the contact with children. The countergirl in an ice cream store liked meeting people and "learning to cope with their moods." Problems on the job reported by the girls were just working part-time, transportation, and "not using my schooling as I was hoping I could with little children and handicapped people."

Class Twelve

Index of Success

The index of success for the child care class of four girls enrolled in an area occupational center in southwestern New York State was not found to be correlated at the predetermined level of significance with variables thought related to success in an occupational education course. A high degree of correlation is required for statistical significance of .05 when the number of students is so small. One correlation, between the index and the spring score on Attitude Toward School, was .98 but still did not meet the criterion for so few students.

Pretest and Posttest Scores

Neither scores on the test instruments nor teacher ratings on the general employability scales changed significantly over the school year. Student self-ratings on the Becoming Employable and Management scales showed positive changes at levels of significance approaching the criterion.

Student Interviews

The girls found working with and observing the nursery school children the most helpful feature of their class. Also referred to were learning about children from the teacher and the readings. When asked for ideas that could contribute to their course four girls said more room and better facilities, including an outside play area for the children, were needed. Two girls thought the nursery school should not open until after the class had had several weeks of instruction to prepare for the young children; two wanted more time for planning nursery school activities and discussing the children. Three girls asked for field trips to hospitals and child care centers. Suggestions made once each were learning more songs and games to teach the children, some foods work, longer nursery school periods, first aid, and a daily break in their long class period.

Three of the girls found their background of several years' work in home economics helpful, one did not. Two felt ready for entry-level jobs in child care, one was not sure, and one said she probably would feel prepared after another year. Three girls chose working in hospitals as their favorite child care jobs; one was satisfied with any work with children. The reasons for their preferences included liking to meet people and wanting to help children who need them. Three of the students had recommended the course to others at the time of the interviews.

Two girls had indefinite post-graduation plans although one hoped for work in child care. One girl expected to join the Air Force; the fourth student wanted to be a nurse or nursery school teacher.

Work Experience

At the time of the interviews jobs held by the girls were mostly baby-sitting and house-cleaning, for which one received the minimum wage. One girl worked at a seasonal job tying grapes for $1.15 an hour. Three had problems on the job handling the children; one girl had trouble getting her pay from the parents who hired her. Two had trouble finding suitable jobs; all endorsed supervised work experience as part of an occupational course.

The end-of-year report prepared by the teacher showed that all the girls had 350 hours of experience as nursery school aides. Work in the nursery school was considered part of the classwork and the girls were not paid.

Follow-Up Study

Since the four students continued in school for another year the follow-up for them terminated at the end of the summer. One girl babysat irregularly at $.50 an hour and picked grapes at $1.35. One also picked fruit and earned in addition $5.00 a week helping her grandfather on his milk route. One girl babysat on a regular basis at $4.00 a day. Two employer ratings of 4.00 were received; three girls rated their jobs at 3.25 to 5.00. Problems encountered on the job included transportation, wanting more work, and occasional difficulty handling the children.

RESULTS: TEACHER REPORTS

A major objective of the present study was to help provide, by means of descriptive data, answers to questions raised by secondary schools and teacher-preparing institutions regarding occupational home economics:

1) What procedures are efficient and what standards reasonable for selection of students?

2) What instructional materials are useful?

3) What facilities, resources, and financing are needed for teaching and training?

4) What are the time demands on teachers?

5) What are the problems schools and teachers meet in setting up and carrying through an occupational course?

6) What are the educational and occupational backgrounds of teachers of job-related home economics courses?

Teachers submitted throughout the year records concerning various aspects of their occupational home economics programs and responded to questionnaires and checklists about relevant facts.

Background of Respondents

Eleven instructors taught the 12 classes in occupational home economics; one instructor taught two courses, Home Economics 14 and a Home Economics 13 class focusing on child care. Seven of the teachers had master's degrees, or the equivalent, in home economics education; one had a master's degree in guidance; and another, a master's degree in science-nutrition. One teacher had a bachelor's degree in home economics and the instructor of a professional food service class in an area occupational center had a diploma in institutional foods management, one year's training in hospital dietetics, and additional work in cafeteria management.

Most of the teachers had experience both in and outside the regular school situation, Table 10. Within the regular school

Table 10

Professional Experience, Participating Teachers

	Class											
Teaching Experience (number of years)	1	2	3	4	5	6	7	8	9	10	11	12
Elementary		*		2	3				4	*		
Junior high		2		3	3		8	2	4	2	3	
Senior high		13	10	22	16	2	12	1	13	13	1	
College	2											
Adult Education		1	1	18	2		*	2	7	1	1	
Hospital						17						
Church							*				*	5
Other	4	5		2	6				1	5	2wks.	
Work Experience (number of years)												
Cafeteria (school or other)	10	*		*	3½	4½			3	*		
Restaurant				*	2		*		2			
Hospital	10					7	*				*	
Private home		*		*						*		
Social work		*								*		*
Office								*				*
Camp counselor								*			*	
Day care center		*								*		
Store (selling)												*
Community catering					*							
Test kitchen												*

*no information about the number of years experience

situation 10 of the teachers had taught at the secondary level and eight in junior high. Nine of the teachers also had experience working with adults; one teacher had five years' experience in religious education.

Eleven of the 12 respondents had work experience other than teaching and in at least two different types of working situations. Eight teachers had worked in cafeterias or restaurants; four had hospital experience. The teachers had widely-varied experience. One, for instance, had worked as a waitress, soda fountain clerk, countergirl, and cook's helper.

Teachers participating in the study were asked to respond to a Likert-type questionnaire, "Teacher Attitude Toward Course".

The teachers were generally favorable toward the new occupational programs; some, however, had more positive feelings than others, Table 11. Individual scores varied from 32-50 in the fall and from 34-49 in the spring. All teachers felt secure in their teaching positions by spring while only 75% had in the fall; some were less sure in the spring than they had been in the fall that occupational programs have a place in the home economics curriculum. Attitudes relating to teachers' and students' abilities and background were more positive at the time of posttesting than they had been in the fall.

A key finding in the study was the change in teacher attitudes toward students of limited academic ability. At the time of fall testing 75% of the teachers said they would have preferred students of less limited mental ability.

Table 11

Teacher Attitude Toward Course

Item	% Positive Responses	
	Fall (n=12)	Spring (n=12)
1. I am very glad to have the opportunity to teach this course.	100	100
2. I think I will feel secure in this new teaching position.	75	100
3. I feel competent to teach this course.	83	83
4. Occupational education belongs in the high school home economics curriculum.	83	75
5. I have had adequate teaching experience for me to teach this course.	92	92
6. I have had enough work experience to provide an adequate background for me to teach this course.	83	83
7. The training I have had in education has been adequate for me to teach this course.	67	83
8. I would have preferred students of less limited mental ability.	75	25
9. I would have preferred students with a different background (socio-economic, ethnic, racial)	50	75
10. I am satisfied with the types and ability of students selected to take the course.	50	67

Some comments made by the participating teachers in the fall were: "So new! Am worried about my background and what I have to offer," "This feeling of insecurity on my part has made me try harder," "The students' background wouldn't matter. Here it is the need of the individual that is important," and "In the teaching of values and attitudes I feel competent." Comments in the spring were: "I really don't care about students' background if I feel that I can help them," and one teacher wasn't sure she was satisfied with the types and ability of students placed in her course "and yet the slower ones have to have a niche."

Teachers also responded to a questionnaire about needed training or experience (Appendix). They were asked to list subjects they had studied which were helpful in teaching an occupational class. Six named foods and nutrition courses; four found institution management, management, psychology, and child development helpful; three indicated quantity food preparation; two listed occupational home economics work shops; and one each mentioned family relationships, vocational guidance, curriculum, bacteriology, business accounting, art, and first aid.

Additional skills they thought they needed were quantity food service and preparation listed by four teachers; use of commercial equipment according to 3 teachers; creative cookery, institution management, catering, guidance, and nursery school techniques, mentioned once each. The teachers were generally satisfied with the work experience they had had, but three said experience working with large quantity food preparation would have been helpful; two teachers said experience in institution management, restaurant work, and counseling would have helped; and one each would have liked more experience in nursery school participation, family meal planning, administration, and teaching students in the basic track.

Selection of Students

Half of the participating teachers responded to a checklist related to criteria used in selecting students (Appendix). Some teachers, particularly in area occupational centers, were not involved; guidance counselors placed the students in the occupational classes. Teachers were asked to check criteria necessary and appropriate for student selection. Level of academic achievement, IQ, age, personal characteristics, student request, and recommendation of teacher or counselor were the criteria checked by the teachers who responded to the questionnaire. In Table 12 it can be seen that although students were selected according to SES in the fall, the respondents did not consider this an appropriate factor in the spring. Teacher judgment of other criteria changed little over the period of the school year.

Table 12

Teacher Reactions to Criteria for Selection of Students

Criteria	Positive Responses Fall (n=6)	Positive Responses Spring (n=6)
Level of Academic Achievement	5	4
IQ	5	4
Aptitude Test	2	2
Age of Student	5	4
Potential Drop-Out	3	2
Recommendation (home economics teacher, guidance counselor, and so forth)	6	4
Student Request	5	4
Parental Request	2	2
Previous Work Experience(or lack of it)	3	3
Personal Characteristics of Students	5	4
Socioeconomic Status	6	1

Time Demands

The teachers spent many hours during the summer in preparation for the programs, an average of more than 150 hours per teacher or about 4 weeks of 40 hours (Table 13). One respondent had done most of her preparation during the summer of 1964. Others took a summer class or workshop in preparation for teaching the occupational course. The most time-consuming activities prior to the course were concerned with organizing classroom teaching--selection of course content and objectives, selection and purchase of equipment, and preparing instructional materials. The other activities, ordered according to time requirements, were: preparing publicity, contacting resource people and prospective employers, developing record and filing systems, preparing budgets, purchasing equipment and supplies, selecting students, and conferences.

About half the teachers' time during the school year was spent in classroom teaching and lesson preparation; about one-fourth of the total time was spent scheduling, supervising, and evaluating work experience. An average of 80 hours per program was reported as the amount of time devoted to conferences and public relations. Activities contributing to public relations were social affairs

Table 13
Pre-Teaching Time Demands

Activity	Hours Spent By Class 1	2	3	4	5*	6	7	8	9	10	11	12	Total Hours
Selecting course content and objectives	75	120	20	60		240	85	20	100	120	50	50	940
Selection and preparation of equipment and instructional materials	30	12	2			120	29	10	100	12	10	**	325
Preparing publicity	3	9		50			2	2	24	4		4	98
Contacting resource people (guest speakers)	10			10		24	29	8	10			**	91
Contacting prospective employers				10			29	6	20				65
Developing record and filing systems	15	8	1	5				20	5	8			62
Preparing a budget	15	12		10				**	10	12			59
Purchasing equipment and supplies	30	4						10	5	4			53
Obtaining student information	2	2		15			3	2	8	2			34
Selection of students		2		15					8	2			27
Conferences with parents									24			**	24
Scheduling classes		2		15					3			**	20
Conferences with guidance counselors		4					1		3	4			12
Conferences with advisory committee							1		10				11
TOTAL NUMBER OF HOURS	180	175	23	190		384	179	78	330	168	60	54	1821

* = worked during summer of 1964

**= no information about the number of hours spent for parents, faculty and staff, employers, and other students; meetings with potential employers, other resource people, and newspaper reporters; and speeches made before such groups as guidance counselors and an Economics Opportunity Council. Conferences with parents required an average of 5 hours per program; conferences with students, largely for guidance purposes, averaged 31 hours per program although one teacher spent 88 hours in conferences with students. Conferences with people other than parents and students averaged 33 hours per program; these conferences were with guidance counselors, advisory committee, coordinators, school administrators, college professors, other vocational education teachers, elementary and kindergarten teachers, psychologists, Cornell research team, employers, and guest speakers.

Category E, other activities, included such things as field trips, testing by Cornell research team, and Albany conferences.

Teaching time demands during the school year included:

	Activity	Total Hours	Average per program
A.	Classroom teaching and lesson preparation	4010	334
B.	Scheduling, supervising and evaluating work experience	2443	204
C.	Routine department business, research, record keeping and correspondence	1294	108
D.	Conferences and public relations	956	90
E.	Other activities	103	9

Most teachers in local high schools had afternoons free for contacting employers, counseling students, and supervising outside work experience. One teacher, Class Three, carried a full teaching load in addition to the occupational class. Teachers in area occupational centers typically taught two classes of three class periods each daily, leaving little time for any activity but classroom teaching.

Instructional Materials

As has been shown, the 11 teachers of the 12 classes spent many hours selecting and preparing instructional materials. A bibliography of materials found useful is included in the Appendix.

Some curriculum materials are related to general employment and are applicable to any home economics occupational education class; others are related to the specific occupational areas of food service or child care.

In the typical situation two-thirds of the budget for instructional materials was spent for textbooks, reference books, pamphlets and leaflets; the other third was used for magazines, newspapers and audio-visual items. A great variety of pamphlets and bulletins, published by professional governmental, commercial, and various special-interest agencies are free or inexpensive materials. The amount spent by schools for instructional materials varied from $44.48 - $225 with the median at $100 and the mean, $115.

The ways in which instructional resources were employed were as broad and varied as the imagination of the teachers. Two examples follow: one related to magazines and newspapers and the other to resource persons.

Magazines and newspapers were used in one class in the following ways:

.Want-ads were explored for available jobs within the locality.

.Job-related news items affecting home and family were posted on bulletin boards; that is, news relating to health insurance, social security, and consumer protection.

.Groups interested in child care were identified from various articles.

.Up-to-date information on fabrics, foods, equipment, health, and safety was gathered for study and use on bulletin boards.

Many different types of resource people were invited to speak to a food service class:

.The French instructor to teach correct pronunciation of French cookery items.

.The school nurse and physical education instructor to teach body mechanics.

.The school safety director and school lunch director to teach safety at work.

.The local caterer to introduce students to problems related to catering.

- A representative of the Social Security Administration to discuss worker benefits.

- Many persons from different types of food service operations to speak about entry-level jobs.

- The White House chef to speak about his training and his duties in the Capitol.

Some learning experiences felt by participating teachers to be especially relevant to a home economics occupational program were:

- Role playing used to report a fire, to call the ambulance, the police, the poison center, and the parents; to illustrate how to act in an interview situation; and how to handle difficulties with boss, customer, and fellow worker.

- Formal and informal receptions involving both small and large groups provided opportunities for menu planning, food preparation and table setting and service.

- Menu collection from local restaurants and from restaurants in cities both inside the country and out to familiarize students with preparation and wording of menus.

- Participation in planning observations of groups of children.

- Field trips to local hospitals, hotels, restaurants, and food plants to acquaint students with work situation and job opportunities.

- Viewing "The French Chef" on television each week as part of their homework.

- Visits to institutions of higher learning to which the trainees could reasonably aspire.

Financing

Teachers tabulated monthly the total expenses incurred by the pilot programs. The data did not include salaries and certain capital expenditures but pointed out the nature of costs involved in occupational programs. In Table 14 the expenses have been categorized as equipment; supplies, such as food and laundry; instructional materials; reimbursed teacher transportation costs; class field trips; and special clothing, the rental or purchase of uniforms. Initial equipment costs were highest in the food service program taught in an area occupational center and in the local high school which established a faculty lunchroom to serve as a laboratory for Home Economics 13 students. Costs of supplies, mostly for food, rose according to the amount of quantity cookery and class catering experience the students had. Money invested in instructional materials was more uniform for all the classes. Six teachers had reimbursed travel expense, exclusive of the two Albany conferences, for visits to potential employers and to supervise training stations. Travel expense ranged from $10. - 135, with the greatest expense incurred by teachers with strong outside work experience program. Miscellaneous costs included such items as postage, flowers, and garbage disposal.

Table 14

Expenses Incurred by Occupational Classes

Class	Equipment	Supplies	Instr. Materials	Teacher Trans.	Field Trips	Special Clothing	Misc.
1	9376.00	778.03	59.25		81.00		
2	400.94	120.05	83.35	10.00			16.90
3			109.75				
4	3069.40	376.00	217.55	123.00		40.00	
5	515.53	504.44	189.44	25.20	50.00		
6.	6639.59	1680.16	104.40		69.40	176.90	66.60
7	224.15	113.93	94.00	135.00			
8	340.00	310.00	225.00		299.00	130.00	18.80
9	1091.00	124.67	54.70		40.00		
10	40.00	43.00	102.20	74.40			2.00
11	2242.40	39.00	44.48			28.41	
12	2522.54	134.00	98.79	24.00	20.00	58.24	
Total	26,461.55	4,223.28	1,382.91	391.60	559.40	433.55	104.30

Not all teachers reported expense for field trips; in some cases the schools absorbed the cost and in others trips were made within walking distance of the schools. Class Eight made especially interesting field trips--to a magazine test kitchen, a famous beauty salon, and dinner and the theatre in New York City--in an effort to extend the horizons of the class of tenth grade students, most of whom have been considered prior to the course to be potential dropouts. The class financed their New York City trip with money earned in catering projects. Most food service classes had the experience of dining in fine restaurants. Sometimes the classes financed their own dinners; occasionally advisory committee members entertained a class.

Facilities

Participating teachers indicated on a checklist (Appendix) the food service or child care facilities available to them.

Food Service

Four major facilities were used in the total food service program: home economics department kitchen, school cafeteria kitchen, faculty lunchroom, and new quantity food preparation unit set up in the classroom. Facilities used most regularly throughout the year were the home economics department kitchen and the class quantity food preparation unit. Six teachers said the department kitchen was an essential facility; five considered the class quantity food preparation unit essential. Table 15 illustrates the regularity of use of food service facilities and the teachers' assessment of the need for each type.

Table 15

Facilities: Food Service Classes

Facility	Class 1	2	3	4	5	6	7	8	9
Class quantity food preparation unit	R***	R**	R***	R***	**	B***	*	R***	*
Faculty lunchroom				*		B***	*	B**	*
Home economics department kitchen		R***	O**	O**	R***	R***	R***	R***	R***
School cafeteria kitchen	R***	O**	R***	O**	O**	B**	O	O**	O**

Key: B = blocked time
R = Used regularly
O = Used occasionally
***= Essential
** = Desirable
* = Immaterial

The most common problem with facilities involved the school cafeteria; three teachers had trouble scheduling use of cafeteria facilities. One teacher hoped for better cooperation from the school dietician another year. Transportation of students to various cafeterias in the school system presented a problem for one teacher; another had to cope with long distances between food storage areas and the faculty lunchroom.

A comment of interest was made by the teacher of Class Seven, "From the types of jobs I have located for high school girls in food service--I do not find quantity cooking is a must--even though I have indicated it is a need in my background."

Most of the schools, seven out of the nine, had both gas and electric equipment. A list of equipment and the incidence of use is presented in Table 16.

Table 16

Equipment Used in Nine Food Service Classes

Equipment	Frequency of Use Regularly	Occasionally
Freezer	6	3
Refrigerator, reach in	4	1
Refrigerator, walk in	1	1
Ovens, conventional	1	1
Ovens, microwave	2	
Range	7	1
Compartment Steamer		1
Mechanical dishwashing equipment	6	2
Steam jacketed kettle	3	
Cafeteria counter	2	2
Broiler	5	1
Deep fat fryer	4	2
Grill	3	1
Blender	3	2
Coffeemaker	4	4
Chopper, mechanical	2	2
Toaster	2	2
Electric slicing machine	2	2
Mixer	7	1
Vegetable peeler	3	1
Trays	7	2
Tray stands	4	2
Uniforms	4	2
Cash Register		3

All items of equipment listed in Table 16 were rated as essential by at least one teacher except microwave ovens, considered desirable.

Some special learning experiences were made possible by facilities and/or equipment added for the course. A faculty restaurant was equipped in one school; in another the availability of the already established faculty lunchroom served as a laboratory for food service students. Freezers contributed to possibilities for catering large affairs. Grills and coffemakers made improvised lunchrooms more realistic. Projects which some teachers felt would have been important, but were impossible to realize because facilities or equipment were not available, included: short order cooking, deep fat frying, broiling meats, and restaurant service. The needed equipment included: grill, fryer, broiler, walk-in refrigerator, electric slicing machine, soda fountain, and large freezer.

Child Care Services

The checklist of equipment likely to be used in a preschool laboratory included both active and quiet play equipment, basic art and music equipment, expendable educational supplies, dramatic play materials, and indoor furnishings and equipment. Table 17 summarizes the teachers' assessment of the usefulness of items of equipment and incidence of use. Only items considered essential or desirable by the teachers were included in the table; the total list of items,Child Care Facilities Questionnaire, appears in the Appendix.

Special projects made possible because of facilities and equipment added for the occupational course were nursery schools set up as laboratories to train child care aides; the two area occupational centers had such programs.

Projects the teachers thought important but impossible to realize because of lack of facilities and equipment were preparing and serving children's food, because a range and refrigerator were unavailable, playground activities, because there was no protected outside area; and preparation and care of rest equipment, because the room was too small.

Teachers' Evaluation of the Pilot Programs

An instrument was prepared for the teachers' end-of-year evaluation of the programs (Appendix) in which teachers were asked to check only items they believed were inadequate or could

Table 17

Equipment Used in Three Child Care Classes

		Class	
Equipment	10	11	12
Active Play Equipment:			
wheel toys	N**	Y***	N
climbing apparatus	N**	Y***	Y***
swing	N*	N**	N
sandbox	N**	N**	N
building materials	N**	Y*	N
Quiet Play Equipment:			
books	Y***	Y***	Y**
puzzles	Y***	Y**	Y***
games	Y***	Y**	Y***
manipulative toys	N	N**	N
Art Equipment and Supplies	Y***	Y**	Y**
Basic Music Equipment	Y***	Y***	Y***
Dramatic Play Equipment			
housekeeping toys	Y**	Y***	Y***
transportation toys	Y**	Y**	Y**
Basic Indoor Furnsihing and Equipment:			
range	Y***	N***	
refrigerator	Y***	N***	
coat rack	N	Y***	Y***
cots or rugs	N	Y***	Y*
library display rack	Y	Y***	
low open shelves	N	Y***	Y***
tables and chairs	N	Y***	Y**

Key: Y = Used in preschool laboratory
N = Not used

*** = Essential
** = Desirable
* = Immaterial

be improved upon the next year they taught an occupational class. Items not checked presumably caused few problems. Major areas, in order of rank, indicated by the teachers as causing difficulty or needing improvement were: Facilities and Resources, Student Work Experiences, Evaluating Students, Communicating, Department Routine, Course,Content, Public Relations, Selection of Stddents, and Financing. Five or more teachers had problems with inadequate storage space, laboratory space, and equipment; finding appropriate work experiences and transportation of students to work; and finding time to develop evaluative instruments and communicate with the advisory committee. Four teachers checked problems related to finding instructional materials, obtaining funds, assigning grades, interpreting program to prospective students, scheduling field trips, and having secretarial help. (Table 18)

Table 18

Teacher-Indicated Problems, End-of-Year Evaluation

Areas	Number of Teachers
1. Facilities and Resources:	
Storage Space	8
Laboratory Space	5
Equipment	5
Instructional Materials	4
Classroom Space	2
2. Student Work Experiences:	
Finding Enough Work Experiences	7
Transportation of Students to Work	6
Obtaining Special Uniforms	3
Obtaining Working Papers	1
Arranging for Physical Examinations	1
3. Evaluating Students:	
Finding Time to Develop Evaluating Instruments	5
Assigning Grades	4
Measuring Changes in Skills	3
Measuring Changes in Attitudes	1
4. Communication With:	
Advisory Committee	5
Guidance Personnel	3
Parents	3
Administration	1
5. Department Routine:	
Scheduling Field Trips	4
Need for Secretarial Help	4
Need for Filing System	2
Purchasing Supplies or Equipment	2
6. Course Content:	
Selecting Content	3
Planning Units of Work	3
Establishing Objectives	2

Table 18 (con't)

Areas	Number of Teachers
7. Public Relations	
Obtaining Publicity Through Mass Media	4
Interpreting Program to Public	3
8. Selection of Students for Course:	
Interpreting Program to Prospective Students	4
Considerations in Selecting Students	2
9. Financing	
Obtaining Funds	4
Preparing Budget and/or Requisition	1

The teachers were invited to comment about their problems. Teacher remarks about student work experience were mostly concerned with obtaining working papers and physical examinations for the students. When adequate advance plans were made the two crucial steps toward student work experience were completed with little apparent difficulty.

The teachers hoped to have more time in the second year of the program to develop better evaluative techniques. To assist her in assigning student grades one teacher hoped to develop a scale which will take some items from the rating scales and relate them to classroom performance, fill in with supporting evidence and discuss with pupils before report card marking.

The teachers were eager to have more time for meetings with parents, guidance counselors, administrators, and advisory committees so that their new programs might be better understood. They pointed out the importance of including on the advisory committee potential employers who could provide jobs for trainees themselves and help in locating other work opportunities. Scheduling meetings with advisory committees presented problems because of the many commitments of committee members. One teacher expected to set up a calendar of meetings at the beginning of the school year in order to make maximum use of her committee. Two teachers welcomed employment in the summer. One wrote:

The occupational home economics coordinator-teacher should have at least one month summer employment to maintain employer-coordinator relationship and also for follow-up procedures with students.

In some schools field trips had to be scheduled several weeks in advance, which the teachers found difficult. One teacher of a child care aide class had a special problem in that she had no operating budget for the school year; all supplies were purchased the preceding summer. She herself paid for perishable supplies or items overlooked by the purchasing agent.

In the area of course content one teacher, who had spent the most hours counseling students of any teacher in the sample commented, "I need to simplify and trim; the students' background is poor. Need more time for group guidance and will use more often." A teacher who conducted many class catering projects planned to change to a double period course the following year "so we can include more food production work with a more realistic approach." A third teacher said she would not include family meal service as such again in her occupational class. Making course content meaningful to low ability students challenged the teacher of a Home Economics 14 class; teaching world of work concepts presented problems to a Home Economics 13 teacher.

RESULTS: REPORTS OF GUIDANCE COUNSELORS

Two major objectives of the study dealt with student placement in occupational classes and the amount of guidance and counseling support needed by the students. Counselors were asked in the fall to respond to a checklist of possible criteria used when guiding students into the new home economics programs. At the conclusion of the courses the counselors were asked to rate the effectiveness of the criteria they had used and to indicate whether, in the light of the experience, other considerations might also be important.

Criteria most often used by counselors as guides for referral of students into occupational courses were age of the student, identification as potential dropouts, recommendation of the home economics teacher, student request, and personal characteristics such as underachievement and poor disposition. At least 13 of the 28 responding counselors had used the major criteria, as shown in Table 19. The most commonly used criterion was the request of the student himself. Criteria used less often were level of academic achievement, IQ, and parental request.

Explanatory comments concerning the use of level of academic achievement as a guideline for placing students in occupational courses were, "Low-academic students with manual dexterity are considered good potentials" and low level of academic achievement "is a valid criterion in many instances; however, I can see a place for certain average or above average learners in such a program." A participating teacher in the study who also served as guidance counselor for her class wrote that her students were chosen as "underachievers, troublemakers. I find that 'taking them where you find them' is most rewarding." One counselor, who said the pilot class in her school was made up of slow learners, thought that students more academically able would be more appropriate members of a Home Economics 13 class. In regard to using IQ in student selection one counselor wrote, "Important in that if you begin screening by IQ usually the higher ones are accepted and lower ones are again left out. A reverse screening is used and important".

Few counselors used aptitude tests or interest inventories as bases for student selection. The Kuder preference test was listed four times and the tests of finger and manual dexterity given by the New York State Office of Employment Service once. Age of students was considered by 16 of the responding counselors when the student was near drop-out age, over age for his class or to meet requirements for working papers.

Table 19

Responses of 28 Guidance Counselors
to Checklist: Considerations in Selecting Students

Criteria	Used in Selection			Rating		
	Y	N	O	Y*	N*	O
1. Level of Academic Achievement						
Overall Average	9	3	16	6	3	19
Standing in Class	8	4	16	5	4	19
Home Economics Average	7	3	19	5	3	20
Other	3	2	23	1	3	24
2. IQ						
Low (75-90)	7	7	14	4	1	23
Average (90-110)	9	6	13	9	0	19
Above Average (110 +)	1	13	14	1	2	25
3. Aptitude Test or Interest Inventory	5	4	19	5	1	22
4. Age of Student	16	4	8	14	3	11
5. Potential Drop-out	13	1	14	11	0	17
6. Recommendation of Teacher:						
Home Economics	14	2	12	14	0	14
Guidance Counselor	19	0	9	16	0	12
Other	5	1	22	5	0	23
7. Student Request	24	2	2	20	1	7
8. Parental Request	8	4	16	7	1	20
9. Work Experience	4	4	20	4	2	22
10. Personal Characteristics	18	1	9	15	2	11
11. SES	2	6	20	1	4	23
12. Other	2		26	2		26

Key: Y = Yes
N = No
O = No Response

Y* = Necessary and Appropriate Factor in Student Selection
N* = Neither Necessary nor Appropriate

Half the counselors considered potential dropouts suitable candidates for occupational classes. A counselor wrote, "I feel a student who graduates on the basis of social promotion, prepared for nothing but the unemployment or welfare rolls, should be termed a drop-out. This should be ocnsidered in the term and then I feel it's essential to consider." A second counselor said it would take two or three years to tell whether such courses will help; one of his students would have dropped out except for the occupational class. One counselor said most of the students in the Home Economics 14 class in his school were potential dropouts. Another wasn't sure of the criterion: "This student might have 'learned' more by leaving school. She was in all kinds of trouble (truancy, smoking, lying, etc.) ALL YEAR. She graduated at the expense of chaos for the director of attendance, etc." The student referred to graduated and at the conclusion of the follow-up study was working and advancing in a job she enjoyed.

Home economics teachers recruited many of their own students; in other cases the students were made acquainted with the new course by their counselors. A counselor commented, "Both are good judges of the individual who would profit by the program." Student interest in the course was the main criterion for placement used by many counselors and they were satisfied with its effectiveness. One noted that those students who requested the course did better than those who were enlisted; a second counselor, however, said students who requested the course were doing well but not any better than the others. Parental request was sometimes a factor in enrollment although more common was the need for parental approval of released time for outside work experience.

Previous work experience or lack of it was used little as a criterion for pupil placement but one counselor thought stress on work experience might be useful. Another emphasized that lack of experience was not always the important factor, that what was needed was "training suited to those floundering in indecision or with lack of hope about entering the world of work."

One counselor pointed out that the criterion, personal characteristics of student, was "important, but can be misleading. Many in [Home Economics 14] program because of low IQ and grades had no ambition to do anything." A second counselor at the same school said most students made little effort and had poor attitudes prior to the course and that she had observed "considerable improvement." A counselor wrote, "In most cases, it is hoped that the course will do something for them along these lines." "This year," wrote another, "chosen because of lack of motivation and ambition and passive or unhappy concerning lot in life. Could be the opposite, however."

Other considerations used in student placement were simply needing a credit for graduation and being able to earn one in the occupational class, and meeting the suggested background requirements of two or more units in home economics.

Counselors were also asked, at the close of the year, to supply information about the amount of guidance and counseling support given students enrolled in occupational education. In large school systems no special support was given; the students were offered the same guidance and counseling service as the rest of the student body. The usual counseling services were at least three conferences during the year and more on a voluntary "drop-in" basis. One large system contacted students in the experimental class on a regular basis; no fewer than five contacts were made. One counselor pointed out that the occupational home economics teacher had been able to work closely with her students and had been willing to personally guide and counsel the girls in the program.

Some individual counselors used such statements as "complete support and encouragement" and "a great deal of counseling," and indicated that numerous contacts--both formal and informal--were made. The following comments are of special interest; both are from counselors in large city high schools:

> My four counselees talked freely about their experiences. Only one was especially 'disenchanted.' She was most unhappy in manual work which involved washing pots and pans. I find young people are very impatient in wanting 'better jobs faster.' Youth wants employment 'status'. (Maybe we should invent some glamorous titles for routine tasks!)
>
> The guidance department worked closely with the home economics department, throughout the year in the counseling and guidance of these students. Specifically, the teacher and I conferred whenever either of us felt it necessary, and I met with the students on many occasions. Incidentally, the teacher did a fine job in orienting these students in this field and in helping them to select and get acquainted with areas of special interest to them. We both attempted to encourage these students and helped them to be more self-confident and enthusiastic. I believe that their increased skill and proficiency have seemed to give them not only a feeling of individual worth but also have helped them to achieve a better position in the eyes of their peers.

Guidance counselors, teachers and other trained observors of the Ithaca pilot study (16) had remarked about the increased poise and self-confidence of students enrolled in the program. Counselors in the present study were asked, therefore, whether they had observed a change in any student enrolled in occupational courses which they attributed to the course. Seven of the 23 responding counselors did not answer the question, one said she had asked the teacher to answer, two said no changes were observed. One counselor of five boys--four of whom had dropped school or the course--said the class did not seem to have done much for his students.

Twelve counselors who answered the question regarding student change gave more favorable responses. Three counselors for students in area vocational centers observed changes. One wrote, "Yes, in several cases where the grades have been good in voed, the local grades have gone up and/or behavior patterns have improved," and a second commented that a student had a higher level of aspiration because of the program.

The third counselor wrote that two of her counselees

> were sincere and would put much effort in their work. However...prior to the time that he entered the Food Preparation program, was really a problem to the school both in discipline and attendance. I feel that this program has helped him to increase his confidence and also attendance. In fact I saw him in class just last week and I feel that he has really become a new person.

A counselor of Home Economics 14 girls said:

> There has been a very noticable change in some of the students. Mostly in confidence and attitude. Many students have improved greatly through this program.

Three counselors in large high schools, one of whom also taught an occupational class, said of their Home Economics 13 students:

> In two instances, girls made noticable progress in improved personality, in general appearance, in mature attitudes, in increased poise, and generally 'blossomed.'
>
> Motivation in all areas increased--passed all subjects. Lost 'chips'--seemed to want to succeed on-the-job. Came back to class saying so many times 'They really like us there; they really help us when we're stuck', as if it was a big surprise...Increased confidence

and general feeling of 'belonging' to the school program seemed to be a most valuable aspect of this program. Also less discipline problems brought to my attention by Dean of Women.

These students have benefitted in many ways as a result of this course. Being in the course gave them real status, and the teacher, as a result of her varied experiences, unusual enthusiasm, and genuine, sincere interest in each girl was able to give them something which many of them had never had before--a feeling of real accomplishment, and success. They were proud to be in the course and part of a new program. They also realized that they were learning something that had a future if they wanted to use it.

RESULTS: CORRELATION MATRICES

In order to answer questions of general interest to occupational education, the twelve classes were treated as a single sample of secondary school students enrolled in occupational home economics. Two matrices were run, one of which explored relationships between test scores, work experience, follow-up data, and background characteristics of students. The second matrix compared student self-ratings with employer and teacher judgment on the descriptive rating scales.

Among the questions of general interest for which answers were sought were:

a. What supporting skills are necessary for success in an occupational education course and entry-level jobs related to home economics?

b. What student characteristics are related to the development of adequate occupational skills?

c. What student characteristics contribute to positive attitudes toward work?

d. Do girls' expectations of working during various periods of the family life cycle change as a result of enrollment in an occupational education class?

e. What factors predict higher-status jobs and higher pay as students leave an occupational course and move into entry-level jobs?

f. What student characteristics and training contribute to a favorable employer's rating?

g. What factors are related to interest in occupational training?

A question of major concern to occupational education is the degree of basic ability students must possess to achieve success both in an occupational class and in an entry-level job. The student's satisfaction with his job is of as much concern as the teacher's or employer's rating of adequate performance. Follow-up job status and follow-up wage are also evidences of job success. Table 20 summarizes data pertinent to this question.

Table 20

Interrelationships of Supporting Skills, Employer Rating, and Job Satisfaction[1]

	NC	IQ	GPA	MC	ATW	WO	JS	ER	ATS	FJS	Wage
Reading Ability	.67***	.35***	.40***	.35***	.46***	.27**	.25	.07	.23*	-.05	-.04
Numerical Competence		.58***	.55***	.41***	.28**	.13	.20	.24	.15	.02	-.18
IQ			.37***	.37***	.34***	.28**	.33*	.28	.15	.15	-.01
Grade Point Average				.65***	.31**	.28**	.21	.22	.17	-.06	-.21
Mark in Course					.23*	.35***	.17	.32*	.05	-.09	-.23
Attitudes Toward Work II						.45***	.10	.07	.42***	-.02	.11
Working with Others II							-.01	.10	.35***	.18	.17
Job Satisfaction								.29	.02	-.11	-.15
Employer Rating									.01	.07	-.16
Attitude Toward School II										-.03	.15
Follow-Up Job Status											.50***

*** Significant at .001
** Significant at .01
* Significant at .05

II = Posttest score

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[1] seeming inconsistencies in significance designation in the Tables are due to wide variations in Ns associated with specific correlations

In the present study scores representing basic academic ability and attitudes thought predictive of success on the job were compared with teacher and employer ratings of the students, job satisfaction and follow-up wage and job status. Job satisfaction was found to have a slight relationship with IQ ($r=.33$) and the employer's rating with the mark earned in the occupational course($r=.32$). The evidences of academic ability--reading comprehension, numerical competence, and IQ--were not significantly related to employer satisfaction with their new employees nor were more positive scores on the Attitudes Toward Work, Attitude Toward Working with Others, and Attitude toward School scales. Scores on the descriptive rating scale, "My Job," ($n=50$) were not significantly related to evidences of academic ability other than IQ nor to the three attitude scales.

Job satisfaction scores and employer's ratings did not correlate significantly. The three attitude scales were, however, intercorrelated at the .001 level. Measures of academic ability were also highly intercorrelated, as is to be expected. Reading ability was closely associated with numerical competence, IQ, grade point average, mark in course, and attitude toward work. Numerical competence was related to reading ability, mark in course, and current grade point average; IQ was shown to be correlated at .001 with grade point average, attitude toward work, and mark in course. The comprehensive measure, grade point average, was thus highly related to reading abiity, numerical competence, and IQ (.001) and significantly related to Attitudes Toward Work (.01) and Attitude Toward Working with Others (.05) scores. Follow-up job status and hourly wage on follow-up jobs were related neither to evidences of academic ability nor attitudes thought predictive of success on the job.

In addition to the intercorrelations represented in Table 20 the measures of basic academic ability--reading, numerical competence, IQ, and grade point average--were highly correlated with pretest scores on achievement tests and pre-ratings on the descriptive rating scales. At the time of posttesting, however, most scores measuring basic academic ability no longer showed strong relationships to achievement test scores and ratings on the descriptive rating scales. Table 21 illustrates this change of pattern in pretest and posttest relationships.

A question closely related to the degree of basic ability required for success in occupational education concerns student characteristics related to the development of occuaptional skills which adequately meet both the standards of the course and the potential employer. As has been shown, basic academic ability was found related to occupational skills, Table 21. Table 22

Table 21

Interrelationship of Evidences of Academic Ability, Achievement Test Scores and Measures of Occupational Skills

	NC	IQ	GPA	MC	FS I	FSII	CCI	CC II	T I	T II	BE I	BE II	M I	M II
RA	.67***	.35***	.40***	.35***	.71***	.10	.26	.66***	.38***	.16	.38***	.20*	.32***	.14
NC		.58***	.55***	.41**	.65***	.23*	.67***	.77***	.42***	.17	.43***	.28**	.39***	.27**
IQ			.32***	.37***	.56***	.22*	.67***	.54*	.36***	.18	.38***	.24*	.41***	.28***
GPA				.65***	.39***	0	.37	.25	.29**	.24*	.32***	.30**	.30**	.18
MC					.42***	.20	.22	.20	.56***	.57***	.61***	.69***	.57***	.64***
FS I						.39***	-	-	.48***	.18	.48***	.25*	.45***	.23*
FS II							-	-	.13	.12	.23*	.17	.16	.13
CC I								.74***	.68***	.48*	.72***	.45*	.58**	.48*
CC II									.58**	.57**	.62**	.52*	.48*	.51
Total I										.63***	.93***	.66***	.94***	.65***
Total II											.65***	.88***	.63***	.86***
BE I												.74***	.87***	.64***
BE II													.67***	.88***
MGT I														.70***

*** Significant at .001
** Significant at .01
* Significant at .05
RA = Reading Ability
NC = Numerical Competence
GPA = Grade Point Average
MC = Mark in Course
FS = Food Service Achievement Test
CC = Child Care Achievement Test

Total = Total score on 4 General Rating Scales
BE = Becoming Employable Rating Scale
MGT = Management Scale
I = Pretest Score
II = Posttest Score

illustrates intercorrelations observed in the present study among employer ratings, teacher post-ratings on the descriptive scales, and other related variables.

The data in Table 22 indicate a high degree of intercorrelation among teacher ratings on the descriptive rating scales measuring both general and specific occupational skills and the mark earned by the student in his occupational education course, suggesting that skills are heavily weighted by the teachers in course marks assigned students. Employer ratings correlated with the teacher's judgment on the Becoming Employable and Management descriptive rating scales, on the average rating of specific skills, and occupational course mark although at a lower level of significance. These correlations are based on 38 employer scales received during the follow-up portion of the study. Data in Table 26 further explore the relationship of selected variables to employer ratings. A multiple regression analysis was also run to look into this key factor.

Attitudinal scores showed closer relationship to each other than to the measures of occupational skills. Related at .001 were self concept with self-confidence, attitude toward home economics, interest in occupational training, and attitude toward working with others. Higher self concept scores also correlated with higher scores on the Becoming Employable descriptive rating scale (.01) and with total employability, management, and the average of specific skills (.05).

Self-confidence scores showed significant relationships to scores on the descriptive rating scales. Scores on the Attitude toward Home Economics, Interest in Occupational Training, and Attitude toward Working with Others scales were also significantly related to teacher ratings of students on the descriptive rating scales.

A third question of general interest to occupational education involves the components of positive attitudes toward work. Table 23 illustrates some of the strongest inter-relationships among Attitudes Toward Work post-scores and other variables investigated in the present study. A multiple regression analysis was also made. The correlation matrix showed Attitudes Toward Work scores on the post-course administration of the test to be most highly correlated with reading ability, IQ, Attitude Toward Home Economics, Attitude Toward Working with Others, Attitude Toward School, and Concept of Self in the World of Work. Correlations at a lower level of significance existed between Attitudes Toward Work scores, and grade point average, scores on the Attitude Toward Type Job scale, and Expectations from the Course score.

Table 22

Interrelationships of Occupational Skills and Significant Variables

	BE II	MGT II	S-CII	SS II	ER	MC	GPA	CS II	HEII	ITII	AWOII
Total Employability II	.88***	.86***	.22*	.80***	.20	.57***	.38***	.23*	.21*	.23*	.24*
Becoming Employable II		.88***	.20*	.85***	.34*	.69***	.43***	.26**	.23*	.21*	.30**
Management II			.31**	..86***	.38*	.64***	.33***	.23*	.14	.20*	.26**
Self-Confidence II				.38***	.27	.11	.05	.48***	.25*	.22*	.33***
Specific Skills II					.41*	.66***	.32**	.25*	.32**	.26*	.25*
Employer Rating						.32*	.22	.06	-.10	-.15	.10
Mark in Course							.65***	.16	.13	.08	.35***
Grade Point Average								.19	.11	.09	.28**
Concept of Self II									.32***	.43***	.71***
Home Economics II										.10	.37***
Interest Training II											.26**

***Significant at .001
** Significant at .01
* Significant at .05

Key: Total Employability = Total Score on 4 General Rating Scales
AWO II = Posttest Score on Attitude Toward Working With Others Scale

Table 23

Interrelationships of Attitudes Toward Work and Significant Variables

	ATW I	RA	IQ	Cum. GPA	Crnt. GPA	TJ II	Exp. II	HE II	WO II	S-C II	AS II	C of S II
Attitudes Toward Work II	.60***	.46***	.34***	.30**	.31**	.27**	.26**	.36***	.45***	.25*	.42***	.34***
Reading Ability			.35***	.32***	.40***	.09	.06	.04	.27**	-.05	.23*	.22*
IQ				.33***	.37***	.08	.12	.05	.28**	.02	.15	.14
Cumulative GPA					.55***	.05	.09	-.04	.18	-.05	.13	.09
Current GPA						.22*	.01	.11	.28*	.05	.17	.19
Type Job II							.49***	.41***	.26**	.20*	.05	.16
Expectations II								.38***	.32**	.26**	.17	.20*
Home Economics II									.37***	.25*	.19	.32**
Working with Others II										.32**	.35***	.71***
Self-Confidence II											.34***	.48***
Attitude School II												.36***

***Significant at .001
** Significant at .01
* Significant at .05

Key: C of S II = Concept of Self in World of Work Posttest Score

Scores on the Attitude toward Type Job, Attitude toward Home Economics, and Expectations from the Course scales were closely interrelated. Self-Confidence scores were significantly correlated with scores on all the attitudinal scales in the matrix, with none of the measures of academic ability. Attitude toward school was highly correlated with--in addition to attitudes toward work--attitudes toward working with others, self-confidence, and self concept.

Little relationship was shown between reading ability and attitude toward the type of job for which the student was being trained, home economics, expectations from the course, and self confidence but some relationship to self concept and attitudes toward school and working with others as well as with attitudes toward work. Student IQ showed little correlation with attitudinal scores except for Attitude toward Working with Others and Attitudes Toward Work.

A question of interest to educators of women is whether girls' expectations of working during various periods of the family life cycle change as a result of enrollment in an occupational education class. At the time of pretesting girls with the greatest expectations of working were those who were older. more employable, and slightly more confident, as shown in Table 24. They also tended to have had more outside work experience prior to the course than their classmates. At the conclusion of the course neither age, Becoming Employable score, nor outside work experience was related to expectations of working throughout the family life cycle. Self-confidence scores, however, were still somewhat important for those who expected to work after their children left home. When t tests were run on pretest and posttest means no significant change was shown in girls' expectations of working, either during various stages in the family life cycle--after marriage, after children, after children go to school, or after children leave home--or their total expectations of working. Most of the girls planned to work after they finished their education; most expected to stay home when their children were small. The following pattern, based on mean scores, emerged:

Expectation of Working:	Pretest Mean Score	Posttest Mean Score
After Education	3.00*	2.98
After Marriage	2.55	2.68
After Children	1.64	1.44
After Children go to School	2.29	2.36
After children Leave Home	2.29	2.42
Total	11.76	11.63

* Highest possible mean score = 3.00

Table 24
Girls' Expectations of Working Throughout Various Stages of Family Life Cycle

Pre-Course

	AC I	ACS I	AC LH I	TE I	Age	S-C I	BE I	WE
After Marriage I	.20*	.22*	.22*	.60***	.23*	.15	.18	.13
After Children I		.26**	.06	.58***	.04	.21*	.07	.29*
After Children go to School I			.28**	.69***	.35***	.13	.18	.30*
After Children Leave Home I				.63***	.21*	.21*	.25*	.17
Total Expectations I					.33***	.25*	.27**	.32*

Post-Course

	AC II	ACS II	ACLH II	TE II	Age	S-C II	BE II	WE
After Marriage II	.20*	.14	.05	.32**	.16	.06	.16	.19
After Children II		.37***	-.04	.47***	-.04	.11	-.19	.08
After Children go to School II			0	.46***	.09	-.17	-.11	.04
After Children Leave Home II				.45***	.04	.25*	.14	0
Total Expectations II					.17	.09	.08	.11

Key: BE = Becoming Employable Rating Scale
WE = Outside Work Experience
S-C = Self-Confidence Scale
AC = After Children
ACS = After Children go to School
ACLH = After Children Leave Home
TE = Total Expectations

***Significant at .001
** Significant at .01
* Significant at .05

Of prime concern to occupational education is the identification of factors which predict higher status jobs and better pay as students leave occupational classes and move into entry-level jobs. Follow-up information in the present study is based on data received from 59 students who were underclassmen working at summer jobs as well as graduates who were able to seek more permanent positions.

In the present research students holding higher status jobs at the time of the follow-up study were those who were older and in higher grades, as would be expected. Those students who were out of school and able to seek more permanent jobs held higher status jobs than those just able to work during the summer or part-time. Those students who held higher status jobs in the follow-up period had had paid outside work experience during their occupational course. Job status prior to the course was also a factor; students who held better jobs before the course tended to hold better jobs after the class. All the above correlations were significant at the .001 level.

Several other variables were significantly related to follow-up status, but at lower levels of significance. Hourly wages received prior to the course and late in the course were significantly related at .01 to status on the follow-up job. The number of hours a student had worked prior to the course was associated with follow-up status. Table 25 illustrates the values of the product moment correlations.

Students receiving higher pay in the follow-up period were also those who were older, in upper grades, or able to seek permanent jobs. They were those who held better-paying jobs in the final days of their occupational education class and who had outside, paid work experience during the course. An interesting finding for vocational educators was that those students who had earned more units of credit in vocational education were those who had higher paying jobs in the follow-up (r=.48). The aforementioned correlations were all significant at .001.

Girls who came into the course with more serious expectations of working after marriage and throughout at least some of the periods of the family life cycle showed a slight tendency to hold better-paying jobs in the follow-up period. Job status of all students both prior to and during the course was related to follow-up wage, as was the hourly wage the student was able to earn prior to the course.

The ultimate measure of success in an occupational home economics class is satisfactory performance on a job the student likes.

Table 25

Interrelationships of Work Experience Variables

	Prior WE	Units Voed	Job Status Pre	Job Status Post	F	Hourly wage Pre	Hourly wage Post	Hourly wage F	WE	Pd/ Unpd	Girls' Exp.I
Grade	.16	.58***	-.03	-.10	.47***	.20	.32***	.58***	.41***	.29**	.28**
Prior Work Exp.		.04	.41***	.28*	.39*	.09	.34*	.28	.37**	.39**	.32*
Units Voed			.13	.08	.24	.18	.20*	.48***	.25*	.20*	.13
Job Status:											
Pre-Course				.76***	.55***	.59***	.41***	.46**	.47***	.40***	.03
Post-Course					.18	.19	.36***	.34	.23*	.37***	-.03
Follow-Up						.44**	.38**	.50***	.51***	.45***	.22
Wage:											
Pre-Course							.44**	.39*	.48***	.37**	.05
Post-Course								.57***	.73***	.89***	-.05
Follow-Up									.60***	.59***	.32*
Outside Work Exp.										.80***	.13
Paid/Unpaid											.01

***Significant at .001
** Significant at .01
* Significant at .05

Employer ratings were received for 40 students in the total sample. Some factors related to employer ratings were reported in Table 20, which presents interrelationships among employer ratings, student job satisfaction, and basic skills; and Table 22, which shows interrelationships among the employer rating, occupational skills, and certain attitude scales. Additional findings based on this small sample are summarized in Table 26. Higher employer ratings tended to be received by students who were rated higher by their teachers on the Becoming Employable and Management scales and also on the descriptive scales rating specific occupational skills. Girls' post-course scores on the Married Women Working questionnaire, measuring commitment to work, were related to higher employer ratings.

Type I work experience, paid outside work experience related to the course, correlated at .05 with employer ratings (r=.55). The other three types of work experience provided students in the total sample were not found to be significantly related to the 40 employer ratings received in the follow-up study. Type II was paid work experience related to the course but under school auspices. Type III was unpaid related work experience such as participation in class catering projects or assisting in a nursery school held in conjunction with the class. Type IV was paid outside work experience unrelated to the occupational education class.

The data in Table 26 show a greater commitment to work as measured by post-scores on the Married Women Working questionnaire for girls who had Type III work experience and less commitment for those having more work experience of Type IV.

The degree of correlation between job satisfaction and related variables is reported in both Table 20 and Table 26. Student IQ was shown to be significantly related (.05) to job satisfaction according to the sample of 50 students who returned the descriptive rating scale, "My Job." The only other variable found significantly related to job satisfaction was the post-score measuring girls' expectations of working after marriage (r=.37, significant at .05).

Occupational education has been shown through test results, interviews and the follow-up study to be meaningful and helpful for many students. Factors contributing to interest in occupational education are,,therefore, of concern to educators. In the present study student background factors found to correlate significantly with scores on the Interest in Occupational Training scale, Table 27 were parents' education and SES. Significant relationships were also found between Interest in Occupational Training post-scores, occupational skills, self-confidence and Self concept, as shown in Table 22.

Table 26

Interrelationships of Variables Related to Employer Ratings

	MWW II	Total Emp. II	BE II	MGT II	SS II	Type I	Type II	Type III	Type IV	MY Job
Employer Rating	.32*	.20	.34*	.38*	.41*	.55*	.17	.33	.09	.29
Married Women Wkg. II		.04	.03	.03	-.08	.09	.34	.33**	-.38*	-.11
Total Employability II			.88***	.86***	.80***	.13	-.11	.08	-.14	-.08
Becoming Employable II				.88***	.85***	.18	.08	-.07	-.02	.06
Management II					.86***	.23	.01	.16	-.01	.09
Specific Skills II						.31	-.16	.01	-.27	-.13
Type I Work Exp.							-.08	.09	-.26	.23
Type II Work Exp.								-.01	.01	.22
Type III Work Exp.									-.10	-.09
Type IV Work Exp.										.11

***Significant at .001
** Significant at .01
* Significant at .05

Table 27
Student Background Factors Related to
Interest in Occupational Training

	IT II	Age	Grade	Mother's Ed.	Father's Ed.	SES
Interest Occ. Trng. I	.37**	.12	-.04	.18	.32**	.18
Interest Occ. Trng. II		.14	.21*	.27**	.26**	.23*
Age		.	.68***	.09	.25*	.19
Grade				.10	.16	.19
Mother's Education					.60***	.27**
Father's Education						.42***

***significant at .001
** significant at .01
* significant at .05

A supplementary correlation matrix investigated interrelationships among student self-ratings, employer ratings, and teacher ratings of students on the descriptive rating scales. Teacher ratings and employer ratings were significantly correlated, as has been reported. Student self-ratings, however, were not shown to be significantly related to employer ratings or to job satisfaction as measured by the descriptive rating scale, "My Job." Teacher ratings and student self-ratings showed little relationship, with correlations rarely reaching levels of significance as high as .05. Student self-ratings both on general and specific descriptive rating scales were consistently intercorrelated at high levels of significance (r=.40-.82). Teacher ratings on the scales were also highly intercorrelated among themselves (r=.44-.88).

RESULTS: MULTIPLE REGRESSION ANALYSES

Atttitudes Toward Work Scale

Data for the total sample which were thought to be related to student attitudes toward work were submitted to multiple regression analysis to determine the best predictors of helpful work attitudes. Student scores on the spring administration of the Attitudes Toward Work scale were used as the dependent variable; independent variables chosen for inclusion in the analysis were IQ, age, reading ability, teacher post-rating on the Becoming Employable descriptive rating scale, cumulative grade point average, and post-scores on the following subsections of the Student Questionnaire: Attitude Toward Home Economics, Attitude Toward School, Interest in Type Job, Interest in Occupational Training, Self-Confidence, and Attitude Toward Working with Others.

Four variables contributed significant weights to the best-fitting regression line; they were, in order: reading ability as measured by the Stanford achievement test (26), attitudes toward school, attitude toward home economics, and interest in occupational training. At this point in the stepwise regression analysis the multiple correlation was R=.66 and 43% of the variance was explained by the four predictors. The remaining variables contributed to the multiple correlation, but the contributions were so small they were not statistically significant and could have occurred by chance. The total contribution of all the predictors was R=.71; the total amount of variance explained, R^2, was 51%.

Thus we see that the proportion of variance in Attitudes Toward Work scores that was dependent upon the battery containing the reading, Attitude toward School, Attitude toward Home Economics, and Interest in Occupational Training tests amounted to 43%; that predicted by all 11 independent variables was 51%. Each predictor makes its unique contribution, and also contributes to the overall regression line estimate.

One question answered in multiple regression analysis is whether all predictors taken together estimate the regression line sufficiently well for it to be statistically significant. The total test of the goodness of fit of the estimated regression line is an F test. In the present case all the predictors taken together estimated the regression line sufficiently well for it to be statistically significant at better than .01.

Beta prime is a standardized regression coefficient $(\beta \frac{\text{S.D. independent variable}}{\text{S.D. dependent variable}})$ which allows for comparisons among the predictors for any given regression case, behaving much like a standard score and enabling one to ascertain which are the stronger predictors. Table 28, which shows the strength of the predictors after all variables have been entered in the stepwise regression, illustrates that IQ, age, and Attitude Toward Type Jobs scores are weak predictors and the four variables contributing significant weights in the stepwise regression--attitudes toward school and home economics, and interest in occupational training remain strong predictors.

Table 28

Multiple Regression Analysis: Attitudes Toward Work
(n=102)

Predictor	Beta Prime	Beta Weight	SE	t
IQ	.078	1.319	1.510	.87
Age	-.057	- .723	.990	.73
Reading	.336	.432	.118	3.66**
Becoming Employable II	-.221	-3.474	1.335	-2.60*
Cumulative GPA	-.151	.470	.267	1.76
Att. Home Economics II	.249	.496	.174	2.85**
Att. School II	.145	1.33	.793	1.68
Att. Type Job II	.032	.315	.820	.38
Int. Occ. Training II	.148	1.437	.782	1.84
Self-Confidence II	.138	1.213	.734	1.65
Att. Others II	.139	1.390	.904	1.54

**Significant at .01
* Significant at .05

$R = .71$
$R^2 = 51\%$
$F_{12,90} = .85$, sig. at .01

Employer's Descriptive Rating Scale

Employer ratings based on a descriptive rating scale were received for 25 juniors and seniors during the follow-up phase of the present study. A multiple regression analysis was run on the small sample to investigate additional, although tentative information about employer requirements for workers in entry-level jobs. Contributors to employer satisfaction were sought. The analysis will be replicated with a larger sample in later planned research. Independent variables submitted for analysis were reading ability, numerical competence, teacher rating on the Becoming Employable descriptive rating scale, total hours of work experience, amount of outside work experience as opposed to work experience within the school, average of teacher post-ratings on descriptive rating scales measuring specific skills, job satisfaction scale, current and cumulative grade point averages, post-scores on the Attitudes Toward Work, Attitude Toward School, and Self-Confidence scales, and post-scores on the Married Women Working questionnaire.

In this instance just two variables contributed significant weights to the best-fitting regression line: numerical competence and outside work experience rather than work experience, perhaps unpaid, within the school. At this point in the stepwise regression an R of .62 was obtained with 39% of the variance explained. The remaining variables, although not significant predictors, contributed to a total R of .80 and total explained variance of 64% for employer's ratings. When the F test that determines the goodness of fit of the regression line estimated from all predictors taken together was performed, the obtained level was non-significant, indicating that these predictors cannot adequately explain components of employer satisfaction.

Table 29
Multiple Regression Analysis: Employer's Descriptive Rating Scale (n=25)

Predictor	Beta Prime	Beta Weight	SE	t
Att. Work II	-.224	-.012	.018	.67
Married Women Working II	.207	.034	.040	.85
Reading	-.360	-.019	.018	1.06
Numerical Competence	.572	.049	.024	2.04
Becoming Employable II	-.215	-.001	.004	.25
Cumulative GPA	-.216	-.032	.047	.68
Current GPA	.343	.037	.048	.77
Att. School II	-.179	-.079	.115	.69
Self-Confidence II	-.124	-.058	.156	.37
Inside/Outside Work Experience	.181	.318	.404	.79
Total Work Experience	-.048	-.068	.332	.20
My Job	.293	.356	.292	1.22
Ave. of Ratings, Specific Skills	.547	.527	.512	1.03

$R = .80$
$R^2 = 64\%$
$F_{13,11} = 1.5$ nonsignificant

DISCUSSION

Quality of the Instruments

The major measuring istruments developed for the present study were achievement tests, descriptive rating scales, and a student questionnaire with subsections probing motivation for enrollment in an occupational education course. Instruments requiring less rigorous developmental procedures were data-gathering forms for use by teachers and guidance counselors and a personal data sheet for collecting information on student background.

Student Questionnaire

Content included in the Student Questionnaire seemed valid in view of a thorough review of literature and successful use in the Ithaca study. The instrument was made up of the following subsections: six Guttman-type scales measuring Self-Conficence, Attitude Toward School, Expectations from the Course, Attitude Toward Type Job, Attitude Toward Working with Others, and Interest in Occupational Training; and three Likert-type scales measuring Attitude Toward Home Economics, Interest in Earning Money, and Concept of Self in the World of Work.

The six Guttman-type scales developed for the study were useful in the measurement of attitudinal changes of considerable importance to occupational education. The reliability of the Guttman scales reached acceptable standards; most coefficients of reproducibility were .90 or above and coefficients of scalability generally reached the criterion level of .60, (Table 3). Expectations from the Course scores had a low coefficient of scalability for fall testing but reached an adequate level when spring scores were analyzed.

The Brookover scale, Self-Concept of Ability, did not scale for the present sample according to the Guttman theory. The result was not surprising since the original scale was developed using seventh grade students of a wider range of ability (4). The sample for the present study contained few students from the higher IQ ranges; students in the present study were also older. Two items on the Brookover scale, items three and six, were used as part of an instrument measuring more general attitudes toward school; this instrument did scale with the present sample.

Interest in Earning Money, although having a high reliability coefficient, may be suspect where content validity is concerned since the scale was so seldom significantly related to other variables. An item showing interest in earning money is one step of the four-point Expectations from the Course scale and responses to questions during the student interviews suggested that earning money through outside work experience was the focal point of the course for many students. Perhaps since most of the young people anticipated earning money through occupational education it was not reasonable to expect more discrimination among students or wider changes in attitudes over the year.

The Attitude toward Home Economics Likert-type scale achieved a high degree of reliability and performed as expected in the evaluation of the pilot programs. The 25-item Concept of Self in the World of Work scale had an acceptable reliability coefficient for an attitude scale, .88, but will be refined for use in further research. The literature was searched for a measure of self concept related to the world of work but valid instruments for secondary school students were difficult to find. The self concept scale devised for use in the present study served its purpose reasonably well.

Descriptive Rating Scales

Content validity of the descriptive rating scales was based on repeated interviews with employers, secondary school teachers, the representative of a civil service employee's association, and University personnel as well as the usual review of literature. Procedures vary from employer to employer, although they are remarkably stable in the area of food service, so that occasionally an individual employer questioned the emphasis placed on an item in the descriptive rating scales. Generally consensus was easily obtained and the major concern with the rating scales was not validity but reliability.

Relatively little has been done to establish methods for determining reliability of descriptive rating scales. The most commonly used system is the calculation of product moment correlations to determine the amount of agreement between judges who have rated the performance of the same worker, and then a stepping up of the correlation coefficient through use of the Spearman-Brown Prophecy Formula to represent the pooled judgment of the desired number of raters, usually 6 - 10. Empirical tests have found such pooling of ratings to most closely approach the true performance rating of the individual being judged (29). Additional methods for establishing reliability involve analysis of variance (12) percent agreement (11), Kendall's concordance coefficient (25), and chi square (2). The split-halves technique is sometimes used to establish reliability of descriptive rating scales but Ryans and Frederiksen wrote:

> ...high internal consistency is not to be expected from certain types of tests, particularly if they are of a composite nature or if they are used in a training situation. If a split-half correlation is high, it does not necessarily mean that the test is highly reliable...(24)

The correlation coefficient is useful, according to Festinger and Katz, "because the extent of agreement that is being obtained can be evaluated in terms of a fixed standard"(9)

Problems commonly encountered when comparing interjudge agreement are the phenomena of central tendency, where the judge tends to assign all students scores near the average; halo effect, where the judge scores the ratee high on all items or low on all items according to his general impression, rather than discriminating among ratee characteristics; and the devastating effect of the single judge who consistently rates higher or lower than the other judges.

There are two sets of judge agreement to look for, the reliability of the discrimination and the extent of agreement between and among judges. In the present study rank correlations rather than product moment correlations were used, as advised by a statistician, to help eliminate differences in the standards of judges. The rank correlation technique served well, but low correlation coefficients were consistently shown for the more exacting judges among the many who participated in the reliability checks.

Rank correlations for the four general employability descriptive rating scales: Becoming Employable, Management, Safety, and Sanitation; the scales tailored to specific food service jobs; the child care aide scales; and the employer's rating scale all had reliability coefficients near .70 or above when stepped up with the Spearman-Brown Phophecy Formula to a pooled estimate of six judges. Pooling the ratings of nine judges, Table 3, resulted in slightly higher reliability coefficients. As expected, the scales describing specific behavior tended to have higher reliability coefficients than scales that necessarily described performance of a more general nature. Borg (3) found reliability coefficients of .70 attainable after several training sessions for judges, and wrote that values as high as .90 can be obtained after repeated training. In the present study time pressures prevented the use of training sessions to ensure that all judges work from the same frame of reference. Even so, for all scales at least one pair of judges reached close agreement.

Ryans and Frederiksen wrote:

> If the correlation is high for certain judges, it would seem to establish the possibility of achieving reliable evaluation of performance, even though correlations were low for other judges. (24)

Food service and child care workers rarely have a number of supervisors sufficiently familiar with their work to judge their performance on the job. Therefore, few reliability checks were made for some of the scales measuring specific food service occupations such as waiter/waitress.

The next step in refinement of those descriptive rating scales to be used in future research will be to check the scales in work situations where more supervisors are able to judge workers in entry-level jobs and to hold training sessions with the raters so that items and standards are clearly understood and agreed upon. If the correlations do not reach a .90 level at that time or a comparably high level if other statistical methods are used, the validity of the scale will be looked at again.

Discrimination indices of the descriptive rating scale items provide clues to ambiguous as well as non-discriminating items. Items found to have low D-values (Appendix) will be sharpened before further interjudge reliabiiity checks are made.

Achievement Tests

Pretesting of the two achievement tests devised for the study, Preparation for Employment in Food Service and Preparation for Employment in Child Care, was extensive and helped in the elimination of non-discriminating items. A few items had to be re-written after pretesting to meet the requirements of the tables of specifictions set up to ensure content validity of the tests. The newly written items did not always discriminate as well as could be desired. Levels of difficulty of items were generally of middle difficulty from 25-75% correct response, which Ebel (7) wrote contribute much to test reliability. Test reliability, determined by the split-halves technique, was lower than desirable for both the child care and food service achievement tests although the sample of 19 child care students was too small to give an accurate estimate of true test reliability. Vocabulary in both achievement tests was overly difficult for the occupational education students; a simplified vocabulary will doubtless be reflected in higher reliability coefficients when the test items are used in later planned research.

Analysis of Attitudes Toward Work Scale

Multiple regression analysis of the Attitudes Toward Work scale, based on a sample of 103, indicated that reading ability, attitude toward school, attitude toward home economics, and interest in occupational training were significant predictors of helpful attitudes toward work. Previous studies had shown the Attitudes Toward Work scale to be related to academic achievement, which presumably reflects student attitudes toward school. The strong relationship between reading ability and the scale was somewhat surprising, in spite of the fact that the scale had been shown in previous studies to be associated with such evidences of academic ability as IQ and grade point average, since it implied that students able to read well had more positive attitudes toward work and that students unable to read had lower scores on the Attitudes Toward Work scale. The vocabulary of the scale is the students' own; items on the scale were drawn from an open-end questionnaire responded to by high school students similar to those who made up the sample for the present study.

That scores on the Interest in Occupational Training scale should predict helpful attitudes toward work was a welcome finding, since the validity of both instruments was enhanced thereby.

Course Effectiveness

Index of Success

The rank correlation is generally accepted as a suitable statistic for use in small non-random samples. An index of success was developed as a means of measuring student progress toward the objectives of the course which used student ranks on the four general employability descriptive rating scales, Becoming Employable, Management, Sanitation, and Safety; an average of ratings on scales measuring specific occupational skills taught in the course; the Attitude Toward Work scale; and the foods or child care achievement test. The index reached concordance at least at the .05 level of significance except in the case of the ninth grade class in the sample. Several reasons can be offered for the low concordance in this instance. The class was atypical in age, grade level, and focus. This was the only class of ninth graders in the sample and it concentrated on orientation to work with little emphasis on skills which is, indeed, the prescribed State curriculum for Home Economics 14. Some measuring instruments, developed for more knowledgeable and highly skilled students, were therefore inappropriate.

Student ranks on the index were compared with student ranks on selected background characteristics, amount of supervised work experience, and motivation for enrollment as spelled out by a major objective of the study. The relationship between the index and success in obtaining jobs, a part of the original objective, could not be determined because only half the sample sought jobs immediately after the course. Success in obtaining jobs is treated, rather, in the description of the individual programs and in a correlation matrix for the total sample.

Comparison of the index of success for each class with the selected variables (Table 5) tended to point up the strong features of individual courses. The variables most often associated with the index--self-confidence, attitudes toward school, academic achievement, and attitudes toward working with others--had been suggested by guidance counselors, psychologists, supervisors, and other trained observers as major contributions of the classes to student development. In two classes, Five and Ten, students came into the course with a good level of confidence or quickly adopted the attitude from their teachers. Two courses, Four and Seven, showing post-scores for the Self-Confidence scale correlating significantly with the index were those having the most related outside work experience opportunities, set up by their occupational education teachers. Class One a food service class taught in an area occupational center, had little outside work experience but much catering experience under an exceptionally capable teacher. The students in Class One were also among the most able in the total sample.

Attitude Toward Home Economics scores showed positive correlations with the index in two classes of generally satisfied students. Students whose expectations from the course were met, according to post-scores on the Guttman scale, achieved greater success in two classes than students whose expectations were not met. In another class those who came into the course with high expectations were those who tended to succeed. Positive attitude toward working with others, as expected, was an important factor in student success in five occupational classes.

Four classes showed positive attitudes toward school to be a significant factor in student success, and academic ability also played a predictable part. Academic ability can quite properly be expected to be associated with success in vocational education classes as well as with traditional courses. The fact that academic ability was not an even stronger component of success attested to the skill with which participating teachers were able to work with less able students or with a class in which abilities varied widely.

Total hours of work experience was significantly related to the index of success only in the class where every student had outside work experience related to her food service course and where the total number of hours represented mostly outside, paid, work experience. Total hours of work experience in other classes included a good deal of unpaid work experience within the school; in some classes work experience was composed entirely of unpaid work experience within the school as nursery school aides or caterers. The finding suggested that total hours of work experience in itself, while valuable according to student interview responses, was not as important as well-selected outside work experiences. Paid, related, outside work experience--Type I--was also significantly related to employer ratings given students in the follow-up portion of the study.

Total units of credit earned in vocational education subjects was important to success in a class of senior girls who had an extensive background in home economics and other vocational subjects. The same class showed the highest correlation between interest in occupational training and the index. Interest in the type of job for which students were being trained was significantly related to success in only one class, the highly-professional area occupational center food service class.

The effects of variables related to success in the three smallest classes in the sample were largely random. Very high correlations are required for statistical significance for such small numbers. Supervised work experience outside the school was largely nonexistent in these three classes, which may have contributed to the lack of correlation of the indices with variables thought related to success in occupational home economics, even though the indices themselves adequately met the criterion of Kendall's concordance.

Changes in Pretest and Posttest Scores

All posttest scores on the many instruments used to measure student progress toward objectives of an occupational course might have been expected to have moved in a positive direction and some of them did, Table 6. Achievement test scores made significant positive gains as did scores on Interest in Occupational Training, Self-Confidence, Concept of Self in the World of Work and Attitude Toward Home Economics.

All, posttest scores, however, did not change positively. That Attitude Toward School scores did not change at all was not surprising in view of the content of the attitude scale. The students knew and appreciated the fact that the schools were making an effort to meet their educational needs through occupational classes and there was no compelling reason for student attitudes to change over the school year.

Negative changes in total commitment to work throughout the family life cycle, attitudes toward food service jobs, and attitudes toward work all occurred in the same class. The class was made up of able girls who had a strong program of outside work experience related to their course. Scores on the three instruments may very well have gone down as the girls moved from idealistic excitement over their first jobs to realistic appraisal of what it means to work. As more-able students they could be expected to become dissatisfied with entry-level jobs and some quickly moved to better jobs. On the other side of the ledger, these girls with realistic work experience had the help of a supporting teacher as they met problems on the job and additionally, made the greatest gains of any class in interest in occupational training and self concept in the world of work. Their teacher reported that the students were much more discriminating as they chose their second and third jobs. The value of the interested teacher and classmates as the student met for the first time the disillusionments of working is obvious. The experience of this class accentuated two real problems for occupational education: how to help students remain satisfied with entry-level jobs when others are unavailable or when they do not have training or ability for better jobs and how to help them over initial disillusionment with working which their youthful idealism makes almost inevitable.

That the students themselves quickly grasped the value of further training is of extreme importance. Although a major purpose of occupational education is to help suudents into entry-level jobs, a purpose of equal importance is the moving of capable students into jobs better suited to their abilities, either through in-service training or further education.

The Attitudes Toward Work scale is as much a measure of the student's ability to judge whether he is being treated fairly on a job and whether a job holds potential for advancement as of his willingness to learn and to cooperate on the job. Lower scores on the attitude scale are in keeping with the general disillusionment suffered in the class. The follow-up study, however, showed some of the class going on for further education and others happily at work who had had discouraging experiences on-the-job during the course.

The scope of changes in pretest and posttest attitudinal scales is noteworthy since basic attitudes are commonly slow to change. More positive self concept and self-confidence can be pointed to with pride by the participating teachers. So also can the considerable gains on achievement tests measuring knowledge and com prehension of child care or food service concepts, adjustment to the world of work, and management at home and on the job. Fewer statistically significant gains were made in post-ratings of occupational skills over pre-ratings than had been anticipated. Some descriptive rating scales were not ready for use until after the courses were well underway; the relatively short period between pre- and post-ratings undoubtedly influenced results. Students in five classes, however, saw themselves as having improved significantly in personal employability characteristics; teachers in six classes saw significant gains in the Becoming Employable descriptive rating scale, Table 7.

Student Interviews

Individual interviews indicated that the students had two major objectives of their own for their occupational education class: to secure training for a job and to get a job. The interviews have been reported in detail in an earlier section. The students were mostly approving of occupational education and made thoughtful, reasonable suggestions for further improvement of their courses. Some students spoke more freely than others; but a pattern of student response emerged for each class.

An interviewer not infrequently heard a student say he or she would have left school except for the occupational class. Many of the students, both academically able and less able, were restless and bored with their traditional high school classes. They liked the informality and activity of occupational classes, the free discussions, and the support and interest of their teacher-confidante. The classes were especially meaningful to them where work experience opportunities were available and their work in class closely meshed with work on the job.

Most of the students felt a strong background of home economics courses was helpful or essential for success in an occupational class. The orientation to work, class projects, and training left little time for learning basic information. At the time of the interviews nearly all students, regardless of the richness of their learning experiences, felt ready to assume an entry-level job in child care or food service. Most of the girls thought they were adequately trained for jobs at later periods in their lives if they left the labor market for a time to raise their families. This assurance can be viewed as a kind of insurance policy for girls who will doubtless work during much of the family life cycle, as will 9 out of 10 married women according to projected figures.

Trying a job and feeling competent to handle it were key factors in student choice of jobs they would like to hold. Poignant remarks often heard by interviewers were students' wishes to meet new people, to be with people, to serve people.

Participating teachers were very successful in acquainting students with possibilities for further training in food service and child care and an encouraging number of students hoped to attend night classes or to earn money at entry-level jobs for further education.

Work Experience

Holding a job seems to have real status for a teenager regardless of the type of job. He does expect the minimum wage and will quickly become more discriminating in his choice of jobs but being able to get and hold a job is, apparently, a sure sign of success for young people in American society today.

The students eagerly looked forward to work experience early in their courses. Some schools wished to be sure students were properly trained before putting them out on a job. From the student's standpoint and, indeed, from the employer's there are many advantages in quickly going out on the job. The students themselves pointed out the value in bringing back to class their problems and triumphs for discussion, support, and the edification of others. The students wanted to try several jobs because so many would soon be required to decide on a permanent occupation. The students were well aware, as they approached the age for leaving school, of the necessity of choosing and preparing for an occupation; for students of limited ability and success the need becomes particularly painful.

A major problem with many of the students--because of their youth, lack of previous success, or below-average academic ability--was their reluctance to look for work opportunities on their own. Many advantages accrued when the school helped such students take the first step into a job. The prestige of the school opened many doors; employers were eager to cooperate. Employers needed trained help and strongly endorsed the school's efforts. The support of the school helped the student overcome his diffidence as he entered the world of work; once having experienced hiring procedures and having held a job he could and did take the initiative for jobs beyond entry-level. A few teachers and one employer interviewed believed students should take the initiative for obtaining all their work experience. The findings of the study showed, however, that even well-trained more able students, particularly in area occupational centers, had difficulty getting jobs or were unable to secure jobs paying the minimum wage and otherwise desirable because they did not know where to start. The students in question lived in urban areas where there would presumably be more work opportunities and where transportation would not pose the problem it did for some students living in rural areas.

One teacher who left job-hunting to student initiative had a very successful course according to test results; but the quality of the student's work experience and follow-up information on the students, although they were seniors who presumably could seek permanent jobs, was disappointing. A contributing factor was a dearth of child care jobs which paid the minimum wage, a problem common to all three child care programs.

Follow-Up Study

The response of both employers and students in the follow-up study was excellent. Employers were sent personal letters explaining the purposes of the study as well as copies of the descriptive rating scale they were asked to use in judging student performance on the job. Students were asked to supply information about their jobs and to rate them using the job satisfaction descriptive rating scale, "My Job." Employers of 24 seniors rated the students lower on the average (3.64) than the students rated their jobs (3.94). Employers of junior students and the students themselves rated both performance and job at near 4.00. A score of 3.00 represents minimum employability and a minimum level of job satisfaction; thus the two groups of students were well above the minimum rating in both employer and job satisfaction. Teacher and employer ratings on the descriptive rating scales tended to correlate significantly, a comforting finding which showed that teachers understood employability requirements.

Additional arguments for supervised outside work experience can be advanced in view of the finding that of the few students earning less than the minimum wage in the follow-up study half had been enrolled in classes in area occupational centers which did not actively seek jobs for trainees as part of the first year of the student's occupational course.

Most students' expectations of meeting people and making new friends on their jobs were realized but difficulty with co-workers was cited as an occasional problem on the job along with low pay (the minimum wage), working on weekends, and too many bosses.

Of major interest to occupational educators was the apparent lack of relationship, according to the major correlation matrix, between employers' ratings and evidences of academic ability--a finding based on follow-up data for the entire sample. When the Employer's descriptive rating scale was submitted to multiple regression analysis based on follow-up data from 25 junior and senior students, however, numerical competence was discovered to be the best predictor of employer satisfaction with an occupational course trainee. Outside work experience during the course also contributed significantly to employer satisfaction as measured by the scale. A sample of 25 is extremely small for multiple regression analysis and the findings, although reasonable, may not hold for similar data from a larger sample in later planned research. The analysis was made in the present study to provide whatever information it could in this little-explored area.

Findings also of interest were significant correlations of follow-up wage and job status with outside work experience, units of vocational education courses, and girls' serious expectations of working at various periods of the family life cycle. Another evidence of the value to entry-level workers of experience, a factor widely acknowledged in more advanced jobs, was the finding that students who had work experience prior to the occupational education course tended to hold better jobs and receive better pay in the follow-up period.

The limited follow-up period cannot give a complete picture of the value of occupational education courses as preparation for satisfying employment. The follow-up study would need to be continued for several years in order to judge the full impact of the classes.

Girls' Expectations of Working During Stages of the Family Life Cycle

The effect of the pilot programs on girls' expectations of working during the various stages of the family life cycle was of interest to educators of women. A comparison of pretest and posttest mean scores showed no significant change in girls' expectations of working. A common pattern emerged in which nearly all girls expected to work after they finished their education and many to work after marriage; most of the girls hoped to stay home with their children during the preschool years. The orientation to work segment of the courses stressed taking adequate measures for the care of children and the ideal of the mother remaining at home with her children during their early years.

Many girls expected to work when their children were in school but not after the children left home, perhaps patterning their lives after their own mothers. Apparently, in their experience, the mother worked to meet the extra financial demands of growing children and quit working when the demands ceased. Few girls seemed to see work as an outside interest the mother might value when her children left home. The opposite viewpoint was expressed, however, by a girl who said she expected to work after the children left home because the aid to dependent children would end then.

Reports from Teachers and Guidance Counselors

Participating teachers supplied a wealth of information about their programs; the teachers responded to an attitude questionnaire as well as providing data on their educational and occupational background, time demands, instructional materials, facilities, selection of students, and their evaluation of the pilot programs. Teacher attitude toward the course, in general, did not change much over the year. All of the participating teachers said they welcomed the opportunity to teach a pilot class, some having observed for years the need for the new dimension in home economics education. Prior to the Vocational Act of 1963 students keenly interested in home economics sometimes had to change to other major subjects in order to train for post-high school jobs or, just as regretable, students who graduated with majors in home economics sometimes had difficulty getting jobs after high school. The teachers had recognized occupational home economics as an extension of traditional home economics classes, a new orientation of the basic courses they had been teaching. The idea of supervised work experience, for example, is not alien to a teacher; the supervised student-teaching experience she herself had had represents a close parallel.

Some teachers were concerned, at the time of fall testing, with the basic ability of some of their students and with certain difficult students who were enrolled in their classes. At the time of posttesting the teachers were more accepting of their students. Student interviews suggested that restless students were often interested by the activity and "difference" of their occupational courses and became more cooperative. The teachers seemed to find that teaching occupational home economics was not as different as they had expected; they felt more sure of their background in education although some wished for more up-to-date work experience in food service or nursery school participation in order to better understand what was expected of their students on the job.

The classes differed widely among themselves. Some teachers stressed mostly knowledge and understanding; some concentrated on specific child care care or food service skills; and some emphasized orientation to work. The pilot courses represented a classic example of the teacher meeting community and student needs as she saw them.

Most of the food service teachers had many years of experience both in teaching and catering, which stood them in good stead. One of the most effective teachers, however, had only two years' of teaching experience. She made up for lack of extensive experience with imagination, ingenuity, and close rapport with her students. Having wide acquaintance with the community was helpful both in fining employment opportunities and recognizing good resource people; in the case of the teacher less well acquainted with her community, however, the problem was solved by an able home economics coordinator and well-chosen advisory committee.

The key finding in relation to time demands of the course is that the teaching load must be correspondingly lightened if the teacher is to have time to set up work experience opportunities and supervise students on the job in even the most cursory way.

Participating teachers listed as among their biggest problems finding and preparing curriculum materials and lack of facilities. Ingenuous use of available facilities was the norm; where class large quantity cookery units were not specifically planned, teachers improvised units. A Home Economics 14 class set up a faculty tearoom within the classroom by simply advertising ahead of time the days when luncheon would be available. Teachers were also imaginative in providing opportunities for simulated work experience.

Locating work experience opportunities that appealed to all students was a problem; some students were harder to please than others and some were just not as employable as others. As the programs continued into second and third years, work opportunities seemed easier to find. For example, at least two programs in later years made definite contracts with institutions for supervised work experience for the students. In the present study teachers were by far the most effective agents in securing jobs for their students. Guidance counselors and work-study coordinators contributed little, at least during the time of the study.

Finding time to work with parents, advisory committees, and others presented a problem. Some teachers welcomed extra employment in the summer which gave additional time for these activities, especially visiting students' homes to discuss the programs, transportation problems, and the like with the parents.

The most effective advisory committees seemed to be those chosen by the teachers themselves. School administrators tended to appoint only school people to advisory committess. The presence of potential employers on the committees was crucial not only because of the doors to work experience which they were able to open, but because of their fresh, optimistic viewpoint.

One problem a few teachers faced was defending an occasional student against dismissal from school. Attendance officers and disciplinarians were sometimes less sure of the value of keeping a difficult, frequently absent, student in school than were teachers who had finally been able to interest such students in a school subject.

The dropout rate for the programs was small, 26 out of 138 students, considering the number of students placed in the courses by counselors who frankly recognized the programs as a last attempt to keep a potential dropout in school. Very few students dropped the course because of disinterest. More typically students dropped out of school altogether because of unfortunate pregnancies or, in the case of some of the boys, the effort made to interest them was just too late. Prominent administrators in at least two of the participating schools expressed the opinion that there is also value in the student's finding he does not like an occupational area while he's still in school and able to switch to another course.

Guidance counselors who were interested in the less able student gave enthusiastic and effective support to the occupational programs. Some counselors could see possibilities in occupational education, as has been reported, for students of many abilities. The fact that student scores on the Attitude Toward School scale, which deals with typical school problems, remained stable over the school year indicated that those students who remained in school were satisfied with their academic niche and felt that their problems and needs had been accommodated--circumstance for which counselors deserved much credit. For at least three programs, however, counselors explained to the research team that they were slow or unable to supply background information on trainees because they were too busy processing records for students who were college bound. Some counselors did not visit the new programs or otherwise become acquainted with them despite the best efforts of the teachers to acquaint them with the new programs.

CONCLUSIONS AND IMPLICATIONS

Prior to 1963 the vocation for which home economics trained girls was the vocation of homemaking; a traditional high school home economics course emphasized management, consumer education, personal and family relationships, home nursing, care and guidance of children, and providing for housing, nutritional, and clothing needs. By 1963 two sociological forces in America had become so strong that legislation governing vocational education was amended and extended to allow for more flexibility and experimentation. One result was that home economics added a further dimension to its traditional emphasis: the training of girls and boys for entry-level jobs in areas in which students had basic home economics knowledge; for example, food service, health care services, and child care. The major social forces having such a profound effect on home economics education were changing conditions in the world of work, brought about by technological advances, which meant that industry no longer readily absorbed the dropout and terminal high school student unprepared for a job; and change in the status of women, whereby home economics education was challanged by an obligation to prepare women for the dual role they increasingly play in America, that of homemaker and wage-earner.

The twelve pilot programs in occupational home economics initiated in New York State followed the guidelines set by President Kennedy's Panel of Consultants on Vocational Education (8) and expanded by the Bureau of Home Economics Education, the State Education Department. Major conclusions in the present study confirm the rationale of the guidelines. Training programs were set up which provided opportunities to acquire skills in food service or child care and to gain experience in realistic work situations; and students were helped to develop reasonable occupational aspirations and confidence in their ability to reach their goals.

Of 138 boys and girls of average, above average, and limited ability who enrolled in the occupational education classes 112 completed the programs, which were obliquely directed at holding potential dropouts in school. Three of the 26 students who failed to complete the course moved to other school districts not yet offering occupational home economics, 8 dropped the classes because of disinterest, and 15 dropped out of school altogether.

Employer interviews indicated that there are jobs available in food service and health care services for the academically less-able student who is dependable, able to get along with others, and willing to accept supervision. The limited follow-up of students into summer or permanent jobs confirmed employer acceptance of course trainees, although an experimental multiple regression analysis based on a small sample indicated that employer satisfaction was greater with the more academically able students in the classes.

Most students, by the conclusion of the programs, showed acceptable attitudes toward work and minimum employability characteristics and skills. Young people were shown to want to work and, indeed, to attach considerable status to being able to hold a job. Students expressed the general opinion, in individual interviews, that any occupational practice, orientation, or work experience was helpful in preparing for jobs; but most prized was class experience closely meshed with paid work experience for an outside employer. Three-quarters of the students interviewed considered their generally strong background of basic home economics courses to be essential for success in occupational education classes.

The participating teachers were able to work successfully with students of widely varing abilities and seemed to find teaching the new classes to be not as different or difficult as they had expected. By the conclusion of the courses teachers felt more sure of their educational background and more accepting of their students. Student post-scores most often showing significant gains over pretest results were scores on the food service or child care achievement test; Interest in Occupational Training, Self-Confidence, Concept of Self in the World of Work, and Attitude Toward Home Economics scales; and employability characteristics, as measured by both students and teachers, on the Becoming Employable descriptive rating scale. The skill with which teachers were able to bring their classes up to a standard of employability was amply illustrated. More able students, who came into the classes with knowledge and skills beyond some of the other students, achieved higher scores on pretest instruments and a strong relationship was shown between academic ability and employability. By the time of posttesting, however, the correlations between employability characteristics and academic ability were smaller, indicating that many less able students were also reaching the higher levels of employability. Teachers were especially effective in their use of resource people, introducing students to different types of jobs and opportunities for advancement in their chosen occupational areas, and acquainting them with further educational possibilities to which they could reasonably aspire.

An impression frequently expressed by both guidance counselors and teachers was that many students were achieving success and recognition for the first time in their school experience. Strong emotional support and guidance was required by some students; teachers acted as counselor-confidant and gave constant support as students met inevitable problems in school and on the job. Guidance counselors who were interested in terminal students and who followed the programs closely gave enthusiastic endorsement although participating teachers sometimes expressed disappointment in the seeming disinterest of individual counselors. Teachers found advisory committees which included key potential employers with their optimistic, fresh viewpoint invaluable to the programs.

Students indicated during the courses and in the follow-up study at least minimal satisfaction with their entry-level jobs. Most students were so eager to work that they were pleased to accept any suitable first job as long as it paid the minimum wage and offered as many hours of work as they wished. As students met the realities of working they became more discriminating about the selection of a second job. Outside related work experience during the occupational home economics course contributed to better hourly wage and higher-status jobs in the follow-up period. Having had more units of vocational education courses was also related to higher follow-up wage and job status.

There were rather striking differences between local programs and classes taught in area occupational centers. Area Centers tended to emphasize skills and knowledge only; local programs stressed, in addition to skills and knowledges: orientation to work, supervised work experience, and preparation of women for their dual role of homemaker and wage-earner. Teachers in occupational centers typically taught two classes of three periods each daily, leaving little or no time for investigating and supervising outside work experience. Work experience was planned as a part of the second year of area programs; both students and teachers, however, suggested that students wanted work experience in any occupational education course and were not always willing to wait for the second year for such opportunities.

In the present study those teachers of local home economics occupational classes who actively sought outside jobs for their students were effective agents in securing meaningful work experiences; students who were left to their own devices did not fare as well in moving into job, a finding in the Ithaca study also. Child Care jobs paying the minimum wage are hard to find at the present time, a fact to be taken into consideration when initiating occupational programs. The problem of outside supervised work experience is a knotty one for area occupational centers, whose students are bused to class over wide distances; however, the inclusion of more orientation to work, personal and family relationships, and other curriculum changes to strengthen the dual-role concept could easily be made.

The Super and Overstreet study (28) showed college-bound ninth grade boys to be slightly more planful than students expecting to end their education with high school graduation. The study also found that more culturally-stimulating homes affected planfulness. In the present study a slight relationship was found between interest in occupational training and parents' education, supporting the Super and Overstreet finding. A stronger relationship was shown between interest in occupational training and self concept, r=.43.

The Crites study (5), concerned with students in elementary grades and junior high as well as high school, was based on the premise that if vocational maturity and vocational self concept fit into a developmental framework, age is a factor. In the present study age showed no significant relationship to attitudes toward work, interest in occupational training, or in employability characteristics and skills. Older girls, at the time of pretesting had greater expectations of working throughout the stages of the family life cycle than the younger girls; the difference had disappeared, however, at the conclusion of the courses. Age was also related to self-confidence when they came into the course, according to pretest scores, but not at the conclusion of the course. As would be expected, the older students had more outside work experience. This may be explained by laws regulating minimum age for employment.

Academic ability was found to be a student characteristic much more crucial to success in occupational education just as in traditional classes than age, SES, or any other background factor. Evidences of academic ability correlated strongly with attitudes toward work, other important attitude scales, and with general employability. Livers reached the same conclusion in his study(19).

Trained observors--high school teachers, counselors, psychologists--commented on the gain in poise and confidence exhibited by many students in the pilot programs and on the carryover into other classes of more responsible attitudes, as had been shown in the Ithaca study (16). Student satisfaction with the course, as expressed in interviews, also paralleled Ithaca findings.

Boys enrolled in the pilot programs expressed a desire for enrollment of more boys in the courses, were moreiinterested in being short order cooks than waiters, and had had more outside work experience prior to the course than the girls had. Interview responses seemed to indicate that boys were more realistic in planning their futures, and that they could see more clearly the chances for advancement in the food service industry. No boys were enrolled in child care classes.

In summary, a program satisfying to the teacher and to the students was characterized by

- .Students having jobs
- .Work experience related to the course
- .Classes of a reasonable size
- .Potential dropouts staying in school
- .Students having some feeling for the course and for the work for which the course trained
- .A positive teacher
- .Enthusiastic support of the administration
- .A program of personal guidance
- .Students feeling free to take their problems to guidance counselor or teacher
- .Students feeling some satisfaction with jobs held during the year and looking forward to jobs of that type
- .An advisory committee which included outside employers

SUMMARY

The Problem

With the passage of the Vocational Education Act of 1963, home economics was redefined to include not only education for homemaking, but also education for gainful employment in jobs requiring home economics understandings and skills. In 1964 a new secondary school home economics curriculum was readied for use in New York State in which occupational education and work experience represented a new program dimension. During 1964-65 Ithaca Senior High School initiated a pilot program, assisted by the Bureau of Home Economics Education, State Education Department. In this program an effort was made to identify effective procedures and practices and to evaluate results, so that recommendations could be made available to schools setting up comparable programs in other parts of the State.

The Department of Home Economics Education at Cornell University became associated with the Ithaca pilot study in order to assist with the evaluation of the program and also to become more knowledgeable concerning the development of such programs.

The Ithaca study (16) served as a pilot study for the present research, the evaluation of 12 classes in home economics occupational education which were conducted in 11 schools in New York State during 1965-66. Evaluation instruments from the Ithaca study were refined and new instruments developed for the evaluation of the expanded program, which included preparation for child care center aides and food service workers.

Objectives

The study had as its major objectives: 1) to evaluate student progress toward specific objectives related to knowledge, job competences, and attitudes toward work 2) to determine the relationship of student success in the course and on the job to selected student characteristics and 3) to provide by means of descriptive data answers to questions of general interest to occupational education regarding student selection, effective curriculum materials, facilities and financing, guidance and counseling support required, time demands on teachers, and teacher educational background and work experience.

Method

Description of Sample

Twelve classes were selected by the Bureau of Home Economics Education for inclusion in the present study: nine classes held in eight local high schools and three classes in two area occupational centers. Seven classes trained students for jobs in food service and three trained child care center aides. Two local classes provided younger students with orientation toward work and limited experience in food service. Classes met for one to two periods daily in local schools and for three periods daily in area centers.

Ages in the sample ranged from 14 to 19, with the mean at 16.52 years. Approximately 69% of the sample were 16 and 17 years old, 17% were younger, and 14% older. One hundred girls and 12 boys completed the course including 10 ninth-graders, 18 tenth-graders, 37 students in the eleventh grade, and 47 in the twelfth. Student IQs were catergorized into four ranges, with 9% falling above 110, 45% from 90-109, 34% from 75-89, and 12% below 75. In eight classes in the sample Stanford achievement test scores measuring numerical competence and reading ability ranged as low as the first percentile rank (26). Highest scores on numerical competence were no higher than the eighteenth percentile rank for five classes; high scores fell between the percentile ranks of 28-58 in four classes, and between the sixty-eighth and seventy-seventh percentile ranks in three. High scores on the reading tests rose as high as the eighty-second percentile rank in three classes but more typically fell at the twenty to twenty-eighth percentile ranks. In one class the highest reading score just reached the eleventh percentile rank.

Thirty-eight students, one-third of the total sample, were considered by their guidance counselors to be handicapped by poor physical or emotional health or by cultural background. Socioeconomic status of the families of students enrolled in the occupational education classes varied from families on welfare to a few where the head was a highly trained professional person.

Facilities for the food service classes included traditional home economics department foods laboratories, school cafeteria kitchens, faculty lunchrooms, and new quantity food preparation units set up in the classrooms. The two area occupational centers training child care center aides held nursery schools in conjunction with the occupational classes. The local program training girls in child care cooperated with kindergartens in the school system.

Collection of Data

Evaluation instruments to measure course effectiveness were administered at the beginning of the course and again at the end of the year's instruction and practice. The instruments included an attitudes toward work scale, a questionnaire probing attitudes toward married women working, a questionnaire assessing reaction to children of various ages, tests of knowledge and comprehension appropriate to the course, and a motivation for enrollment questionnaire. Student background information was assembled from school records and a personal data sheet. Each student was interviewed at the conclusion of the course. A series of descriptive rating scales to measure general qualities related to employability and a series of scales to rate specific occupational skills were administered early in the course and again at the end of the school year. Both teacher ratings and student self-ratings were obtained. The following information from participating teachers was assembled: an attitude questionnaire, time and cost records, facilities checklist, a bibliography of useful instructional materials, report of students' work experience, educational and occupational background, and end-of-year evaluation. All instruments are included in the Appendix.

In addition to visits to the pilot programs in the fall and spring by the project leader and staff to collect pretest and posttest data, visits were made midway through the programs to observe classes, answer teachers' questions, and interpret evaluation instruments. Two conferences of teachers, research staff, and Bureau of Home Economics Education personnnel were held. At the conclusion of the occupational classes students who were to remain in school for another year were followed into their summer jobs; for graduates and dropouts the follow-up continued for six months.

Development of Instruments

Some evaluation instruments used in the present study were developed in earlier research projects carried out by the Department of Home Economics Education, the Linton study (6) and the Ithaca study (16). Instruments developed expressly to meet the objectives of the present study were:

1) Descriptive rating scales to complete a series of four general scales applicable to many entry-level jobs: Management, Safety, and Sanitation.

2) Descriptive rating scales, designed for use in conjunction with the general scales, to measure specific skills

taught by the courses: Child Care Center Aide, Dietary aide, Family Meal Specialist, Cafeteria Counterman, Short Order Cook, and Cook's Helper.

3) Two descriptive rating scales for use in the follow-up study: Employer's Rating Scale, to measure employer satisfaction with trainees, and "My Job" scale, to measure student satisfaction with their jobs.

4) Questionnaires and data sheets for collecting information from guidance counselors and teachers.

Instruments refined or adapted for the current study included: achievement tests appropriate for the foods service or child care course, interview schedule, personal data sheet, and a student questionnaire which had as its subsections Guttman- or Likert-type scales measuring factors thought to be motivation for enrollment in an occupational education course.

Content validity of the instruments was established through a thorough review of literature and extensive interviews with teachers, employers, the representative of a civil service employees' association, and appropriate University personnel. Item analyses of instruments were made to determine item discrimination and level of difficulty, where relevant. The achievement tests were pretested, before use in the present study, on approximately 100 students comparable in age and academic background to the current sample. Subsections of the Student Questionnaire were investigated for Guttman-type scales. Interrater reliability of descriptive rating scales was checked by means of rank correlations, stepped up with the Spearman-Brown formula.

Statistical Analysis to Determine Interrelatedness of Variables

In addition to analyses necessary to determine quality of instruments, three major analyses of data were made: compilation of an index of success for students in individual classes and correlation of each index with selected variables, correlation of test scores for the total sample with relevant variables, and multiple regression analysis of two major instruments - Attitudes Toward Work Scale and Employer's Rating Scale.

Results: Quality of Instruments

Guttman scales with acceptable coefficients of reproducibility and scalability were obtained for the following subsections of the

Student Questionnaire: Interest in Occupational Training, Attitude Toward School, Attitude Toward Type Job, Attitude Toward Working with Others, Self-Confidence, and Expectations from the Course. Two subsections, Interest in Earning Money and Attitude Toward Home Economics, did not scale according to the Guttman theory and were used as Likert-type scales; both had reliability coefficients of .98 according to Hoyt-Stunkard (15). The Brookover Guttman scale(4), Self-Concept of Ability, incorporated in the Student Questionnaire by permission of the author, did not scale for the sample in the present study. A 25-item Likert-type scale, Concept of Self in the World of Work, had an acceptable reliability coefficient of .88.

Review of literature and repeated interviews with employers and university personnel established content validity of the descriptive rating scales. Reliability was checked by employers of young people in entry-level jobs in food service and child care. Reliability coefficients based on pooled ratings of 6-9 judges reached levels near .75 for the general scales--Becoming Employable, Management, Safety, and Sanitation--and .75 - .92 for scales rating occupational skills specific to food service or child care. Analyses showed generally acceptable item discrimination for the descriptive rating scales.

Items on the achievement tests were analyzed for discriminating power and level of difficulty. They were generally adequate although some did not contribute to test reliability, found to be .82 for the food service achievement test (n=92) and .68 for the child care achievement test (n=19). Content validity of the two achievement tests was based on tables of specifications which included concepts related to adjustment to the world of work, management at home and on the job, and development of job competences.

Results: Course Effectiveness

Index of Success

An index of student success was developed by ranking students according to posttest scores on seven instruments: the four general descriptive rating scales, an average of ratings on scales measuring occupational skills specific to food service or child care, Attitudes Toward Work, and achievement test. Concordance coefficients for the indices reached significant levels except for an atypical ninth grade class. Student rank on index of success was compared with ranks on IQ, academic achievement, SES, amount of supervised work experience, total units of vocational education courses, and the subsections of the Student Questionnaire which were felt to be motivating factors for enrollment in an occupational education class. Variables found most often associated with student success in occupational home economics were self-confidence, concept of self in the world of work, attitude toward school, academic ability, and attitude toward working with others. Other variables associated with success in more than one class were attitude toward home economics and expections from the course. Total work experience, SES, units of voed, attitude toward type job, and interest in occupational training were significantly related to success in one of the occupational classes. In the case of instruments which were administered twice variables correlating significantly with the index usually represented post-scores.

Difference Between Pretest and Posttest Scores

Significant changes in pretest and posttest scores were found most often for the achievement tests, Preparation for Employment in Child Care and Preparation for Employment in Food Service; Interest in Occupational Training; and both teacher ratings and student self-ratings on the Becoming Employable descriptive rating scale. Scores for Attitudes Toward Work, Self-Confidence, Coneept of Self in the World of Work, and Attitude Toward Home Economics changed significantly in three classes. Attitude Toward Working with Others scores gained significantly in one class, Attitude Toward School did not change significantly in any of the 12 classes in the total sample. Most changes in pretest and posttest scores were positive, the only negative changes occurring in a single class.

Student Interviews

Student attitudes toward supervised work experience figured prominently in interview responses. Supervised work experience of any kind was seen by the students as useful, whether under school auspices or for an outside employer. The students, however, nearly unanimously endorsed paid work experience for an outside employer as an indispensable feature of occupational education. Since the major purpose of the student was to get a job, anything that helped him choose an occupation or prepare for work was seen as helpful. Students expected their occupational courses to be different from other classes and their expectations were largely met. The differences they expected included, in addition to outside work experience, an active class with demonstrations, simulated work experience, field trips, visits from resource people, and informal discussion.

A majority of the students found their extensive background of home economics courses necessary for success in occupational classes, especially food service. Some students, already possessing a strong background, said they needed more and the rare class which did not have a background of basic home economics said it was needed. Most students felt sufficiently well prepared, at the time of the interviews, for entry-level jobs in food service or child care. Girls were asked whether they thought they had enough training to return to food service or child care jobs at later periods in their lives if they followed the common pattern of leaving the labor market to raise families. Most girls felt competent to handle entry-level jobs at any period in their lives.

When students were asked which type of food service or child care jobs interested them most, their replies depended on the richness of the course. Students having a wider variety of experiences in class and on the job were more selective than those who had little chance to explore work opportunities. Students usually chose certain jobs because they had tried the job, liked it, and felt competent to do the work. Many hoped to go on for further training in child care, food service, or other areas of interest after completing high school.

Work Experience

The most striking finding in regard to work experience was that 51 of 68 students (75%) were earning less than the minimum wage, usually $.50 - .75 an hour babysitting or mowing lawns prior to the course; whereas 43 of 53 working students (81%) were earning the minimum wage or more by the conclusion of the course. According to the students themselves, the strong programs among the 12 classes were those where the teacher actively sought work experience opportunities for her class and helped students make the initial contacts with employers. Students wished to go out on jobs early in the courses in order to earn more money and for more varied experience.

Problems were encountered on jobs held during the school year by surprisingly few students but were predictable: getting along with co-workers, low pay, transportation, and too many bosses.

Follow-Up Study

The follow-up study ended at the close of summer for those students who continued in school another year and therefore sought only temporary or part-time jobs. The follow-up continued until December first for students who graduated or otherwise left school and who looked for more permanent jobs. Responses were received from 100 of the 112 students who completed occupational education courses. Fifty-eight students held jobs during the follow-up period of the study; 16 did not seek jobs because of their age or they were needed at home; 21 trainees, mostly the younger people in the sample, looked for regular jobs but were unable to find them; five students went on for further education.

Employers rarely rated a trainee below 3.00, the level intended to describe minimum employability. The mean rating for 24 seniors was 3.64; for 13 juniors, 4.00. Seniors rated their jobs on the job satisfaction scale, "My Job," at 3.94 and juniors at 3.95. Job satisfaction ratings ranged from 2.52 to 5.00 for the total sample.

Forty-one of the fifty students for whom follow-up wage was available received the minimum wage or above during the period of the follow-up study. Of the nine students who received less than the minimum wage, five had been enrolled in food service or child care classes in area occupational centers, three were ninth-graders, and one was a school dropout. Most of the students were successful in their jobs; two students did poorly in their first jobs but well in their second. Nine of the 21 students who could not get jobs were enrolled in courses in area occupational centers, ten were enrolled in Home Economics 14 classes for younger students, and two were in Home Economics 13 classes.

Dropouts

Of 138 boys and girls of average, above average, and limited ability who enrolled in the occupational education classes 112 completed the programs, which were obliquely directed at holding potential dropouts in school. Three of the 26 students who failed to complete the course moved to other school districts not yet offering occupational home economics, 8 dropped the classes because of disinterest, and 15 dropped out of school altogether.

Results: Reports from Teachers and Guidance Counselors

Participating teachers supplied a wealth of information about their programs; they responded to an attitude questionnaire as well as providing data on their educational and occupational background, time demands, instructional materials, facilities, selection of students, and their evaluation of the pilot programs. Teacher attitude toward the course, in general, did not change much over the year. All the participating teachers said they welcomed the opportunity to teach a pilot class. Some teachers were concerned, at the time of fall testing, with the basic ability of some of their students and with certain difficult students who were enrolled in the classes. At the time of posttesting the teachers were more accepting of their students. The teachers seemed to find that teaching occupational home economics was not as different as they had expected; at the time of posttesting they felt more sure of their background in education although some wished for more up-to-date work experience in food service or nursery school participation in order to better understand what was expected of their students on the job.

The classes differed widely among themselves. Some teachers stressed knowledge and understanding; some concentrated on specific child care or food service skills; and some emphasized orientation to work. The pilot courses represented a classic example of the teacher meeting community and student needs as she saw them. Teachers were especially effective in their use of resource people, introducing students to different types of jobs and opportunities for advancement in their chosen occupational areas, and acquainting them with further educational possibilities to which they could reasonably aspire.

Although most of the food service teachers had many years of experience both in teaching and catering, one of the most effective teachers had only two years of teaching experience. Having wide acquaintance with the community was helpful both in finding employment opportunities and recognizing good resource people; in the case of the teacher less well acquainted with her community, however, the problem was solved by an able home economics coordinator and well-chosen advisory committee.

The key finding in relation to time demands of the course is that the teaching load must be correspondingly lightened if the teacher is to have time to set up work experience opportunities and supervise students on the job in even the most cursory way.

Participating teachers listed as among their biggest problems finding and preparing curriculum materials and lack of facilities, especially storage space. A bibliography of useful curriculum materials was prepared from teacher reports and is included in the Appendix. Ingenuous use of available facilities was the norm. Locating work experience opportunities that appealed to all students was a problem; some students were harder to please than others and some were just not as employable as others. In the present study those teachers of local home economics occupational classes who actively sought outside jobs for their students were effective agents in securing meaningful work experiences; students who were left to their own devices did not fare as well in moving into jobs, a finding also in the Ithaca study. Child care jobs paying the minimum wage are hard to find at the present time, a fact to be taken into consideration when initiating occupational programs.

There were rather striking differences between local programs and classes taught in area occupational centers. Area centers tended to emphasize skills and knowledge only; local programs stressed, in addition to skills and knowledges: orientation to work, supervised work experience, and preparation of women for their dual role of homemaker and wage-earner. Teachers in occupational centers typically taught two classes of three periods each daily, leaving little or no time for investigating and supervising outside work experience. The problem of outside work experience is a knotty one for area occupational centers, whose students are bused to class over wide distances; however, the inclusion of more orientation to work, personal and family relationships, and other curriculum changes to strengthen the dual-role concept could easily be made.

Guidance counselors who were interested in the less able student gave enthusiastic and effective support to the occupational programs. An impression frequently expressed by both guidance counselors and teachers was that many students were achieving success and recognition for the first time in their school experience. Strong emotional support and guidance was required by some students; teachers acted as counselor-confidante and gave constant support as students met inevitable problems at school and on the job.

The factors most often given consideration by the six teachers who aided counselors in the placement of students in occupational home economics classes were level of academic achievement, IQ, age, recommendation of teacher, student request, SES, and personal characteristics of students. The counselors, 28 of whom cooperated in the study, placed students according to the following, in order of greatest use: recommendation of teacher or counselor, level of academic achievement, student request, personal characteristics, IQ, age, and potential dropout. Some counselors could see possibilities in occupational education for students of many abilities, although others cautioned that the less able student must not be discriminated against and again left out.

Results: Correlation Matrices

The 12 classes were treated as a single sample of secondary school students enrolled in occupational home economics in order to seek answers to questions of general interest to occupational education. A question of major concern is the degree of basic ability students must possess to achieve success both in an occupational class and an entry-level job. Scores representing basic academic ability and attitudes thought predictive of success on the job were compared with teacher and employer ratings of the students, students' job satisfaction, and follow-up wage and job status. Job satisfaction was found to have a slight relationship to IQ ($r=.33$) and the employer's rating with the mark earned in the occupational course ($r=.32$). Scores on the three scales, Attitudes Toward Work, Attitude Toward

Working with Others, and Attitude Toward School, were highly intercorrelated but were not shown to be significantly related to scores on the Employer's Rating Scale. Follow-up job status and hourly wage on follow-up jobs were related neither to evidences of academic ability nor attitudes thought predictive of success on the job. Basic academic ability was found to be related to occupational skills as measured by teacher ratings on the descriptive rating scales. Teachers and employers tended to rate student occupational skills similarly; student self-ratings, however, rarely correlated with teacher ratings at even the .05 level and showed no relationship to employer ratings. Attitudinal scores showing significant relationship to teacher ratings of students on the descriptive rating scales were Concept of Self in the World of Work with the Becoming Employable and Management descriptive rating scales, and with an average of teacher ratings on scales measuring occupational skills specific to child care or food service. Scores on the Self-Confidence, Attitude Toward Home Economics, Interest in Occupational Training, and Attitude Toward Working with Others scales were also significantly related to occupational skills.

Another question of general interest to occupational education involves the components of positive attitudes toward work. The correlation matrix showed Attitudes Toward Work scores to be significantly correlated at .001 with scores on the Attitude Toward School, and Concept of Self in the World of Work scales; and IQ and reading ability. Correlations at a lower level of significance existed between Attitudes Toward Work scores, grade point average, and the Attitude Toward Type Job and Expectations from the Course scales. The findings from a multiple regression analysis of the Attitudes Toward Work scale were somewhat different, however.

A question of interest to educators of women is whether girls' expectations of working during various periods of the family life cycle change as a result of enrollment in an occupational education class. At the time of pretesting girls with the greatest expectations of working were those who were older, more employable, and slightly more confident. They also tended to have had more outside work experience prior to the course than their classmates. At the conclusion of the course the only variable significantly related to work expectations was self-confidence.

Of prime concern to occupational education is the identification of factors which predict higher status jobs and better pay as students leave occupational classes and move into entry-level jobs. Follow-up information received from 59 students both underclassmen working at summer jobs and school graduates, showed slight relationships to exist between higher-status follow-up jobs and age, paid outside work experience during the course, hourly wage and job status prior to the occupational education course, and wage during the course. Hourly wage on follow-up jobs was slightly related to age, higher wage during the course, outside paid work experience during the course, units of vocational education courses, girls' expectations of working during stages of the family life cycle, and job status prior to and during the course.

Results: Multiple Regression Analysis

Data for the total sample which were thought to be related to student attitudes toward work were submitted to multiple regression analysis to determine the best predictors of helpful work attitudes. Student post-scores on the Attitudes Toward Work scale comprised the dependent variable; independent variables chosen for inclusion in the analysis were IQ, age, reading ability, teacher post-rating on the Becoming Employable descriptive rating scale, cumulative grade point average, and post-scores on the following subsections of the Student Questionnaire: Attitude Toward Home Economics, Attitude Toward School, Interest in Type Job, Interest in Occupational Training, Self-Confidence, and Attitude Toward Working with Others. Four variables contributed significant weights to the best-fitting regression line; they were, in order: reading ability, attitude toward school, attitude toward home economics, and interest in occupational training. At this point in the step-wise regression analysis 43% of the variance was explained by the four predictors. The remaining variables contributing to the multiple correlation but were not found to be significant weights. All the predictors taken together estimated the regression line sufficiently well, however, to be statistically significant at better than .01.

A multiple regression analysis was run on a small sample of employer ratings of junior and senior trainees to investigate additional, although tentative, information about employer requirements for workers in entry-level jobs. Contributors to employer satisfaction were sought. In this instance just two variables contributed significant weights to the best-fitting regression line: numerical competence and having had outside work experience as opposed to work experience within the school. At this point in the stepwise regression 39% of the variance was explained. The other independent variables which had been submitted in the analysis included reading ability, teacher rating on the Becoming Employable descriptive rating scale, total hours of work experience, average of teacher post-ratings on descriptive rating scales measuring specific skills, job satisfaction scale, current and cumulative grade point averages, post-scores on the Attitudes Toward Work, Attitudes Toward School, and Self-Confidence scales, and post-scores on the Married Women Working questionnaire. When the F test that determines the goodness of fit of the regression line estimated from all predictors taken together was performed, the obtained level was non-significant, indicating that these predictors cannot adequately explain components of employer satisfaction.

Discussion

The major finding in regard to instrument development was the apparent importance of measures of basic abilities, numerical competence and reading, as predictors of helpful attitudes toward work and employer satisfaction with occupational home economics trainees. Multiple regression analysis showed reading ability to be the best predictor of attitudes toward work and numerical competence to best predict employer ratings. Positive attitudes toward school, home economics, and occupational training were significant predictors of helpful attitudes toward work, a more hopeful finding for the teacher of less able students, who may be helpless to improve reading ability but effective in assisting students toward better attitudes. The teacher can perhaps also seek outside work experience, which contributes to employer satisfaction, more easily than she can help the student improve in numerical competence.

Correlating student ranks on an index of success in his occupational course with background characteristics and motivation for enrollment showed variables most often contributing to student success in occupational education to be increased self-confidence, more positive attitudes toward school and working with others, and academic ability. The teachers seemed to be able to circumvent low academic ability, a factor to be reckoned with in occupational education as in traditional courses, by building confidence and strengthening attitudes favorable to success in occupational courses.

Teacher success in building self-confidence and positive attitudes was again illustrated by posttest scores showing significant gains over pretest results on the Interest in Occupational Training, Self-Confidence, Concept of Self in the World of Work, and Attitude Toward Home Economics scales. All posttest scores did not change positively; in a single class there was negative change on the Attitudes Toward Work, Attitude Toward Type Job, and Married Women Working questionnaire. The negative changes occurred in a class of more academically able students who had extensive outside work experience. Apparently, as the girls met the realities of working, their idealistic attitudes toward work in general changed, they were less pleased with food service jobs, and less committed to working throughout the family life cycle. The improvement in personal employability characteristics, as measured by significantly higher post-ratings on the Becoming Employable Scale, was a notable finding since employers heavily stressed the importance of these occupational skills.

Major findings from individual student interviews were students' near unanimous endorsement of outside work experience as an integral part of occupational education and their feeling that a strong background of basic home economics courses was essential for success in home economics occupational education. At the time of the interviews nearly all students, regardless of the richness of their learning experiences, felt ready to assume an entry-level job in child care or food service. The girls' assurance that they were adequately trained for jobs at later periods in their lives if they left the labor market for a time to raise their families can be viewed as a kind of insurance policy since, according to projected figures, 9 out of 10 women will work during at least part of their married lives.

Findings related to work experience were of special interest to occupational educators. Holding a job seemed to have real status for a teenager regardless of the type of job. He expected the minimum wage and quickly became more discriminating in his choice of jobs. Being able to get and hold a job was apparently a sign of success for these young people in these occupational classes. Students eagerly looked forward to outside work experience early in their courses. Some teachers hesitated to send students out on jobs feeling they needed extensive training first. From the students' viewpoint, and also the employers', there were many advantages in quickly going out on the job. Students were able to take back to class their problems and successes for discussion and support. The students wanted varied experiences to help them decide on a permanent occupation, imminent decision. A major problem with many of the students--because of youth, lack of previous success, or below-average academic ability--was their reluctance to look for work opportunities on their own. Important advantages accrued when the school helped such students take the first step into a job. The prestige of the school opened many doors; employers were eager to cooperate. The student, once having experienced hiring procedures and having held a job, could and did take the initiative for later jobseeking. An occasional teacher and one employer believed students should take the initiative for obtaining all their work experience. Follow-up findings showed, however, that even well-trained more able students had difficulty getting jobs or were unable to secure jobs paying the minimum wage and otherwise desirable because they did not know where to start.

Additional follow-up findings showed teacher and employer ratings on the descriptive rating scales correlating significantly, which indicated that teachers well understood job requirements. Of the few students earning less than the minimum wage in the follow-up study half had been enrolled in classes in area occupational centers which did not actively seek jobs for trainees as part of the first year of the students' occupational course. Most students' expectations of meeting people and making new friends on their jobs were realized but difficulty with co-workers was cited as an occasional problem on the job along with low pay (the minimum wage), working on weekends, and too many bosses.

Additional findings were significant correlations of follow-up wage and job status with outside work experience, units of vocational education courses, and girls' serious expectations of working at various periods of the family life cycle.

The effect of the pilot programs on girls' expectations of working during the various stages of the family life cycle was investigated. A comparison of pretest and posttest mean scores showed no significant change in girls' expectations of working. A common pattern emerged in which nearly all girls expected to work after they finished their education and many after marriage; most hoped to stay home with their children during the preschool years.

In summary, the present study found that a successful program in home economics occupational education was characterized by students having outside work experience related to their course, classes of reasonable size, potential dropouts staying in school, students having some accepting feeling for the course and for the work for which the course trained, a positive teacher, enthusiastic support of the administration, a program of personal guidance, and an advisory committee which included outside employers.

REFERENCES

1. Ahmann, J. Stanley, and Glock, Marvin D. Evaluating Pupil Growth. Boston: Allyn & Bacon. 1963.

2. Bales, R.F. Interaction Process Analysis. Cambridge: Addison-Wesley. 1950.

3. Borg, Walter R. Educational Research. New York: David McKay Company, Inc. 1963.

4. Brookover, Wilbur B. et.al. Self-Concept of Ability and School Achievement. Cooperative Research Project No. 845, Office of Research and Publications, Michigan State University. 1962.

5. Crites, John O. "Measurement of Vocational Maturity in Adolescence: 1. Attitude Test of the Vocational Development Inventory." Psychological Monographs. 79, 1965. No. 2 (whole No. 595). Pp.2,35.

6. Dennis, Katherine, and Nelson, Helen Y. Report of Testing Programs: 1958 - 1960 Linton High School, Schenectady. Unpublished report, The Department of Home Economics Education, New York State College of Home Economics, Cornell University. Ithaca, New York. 1962.

7. Ebel, Robert L. Measuring Educational Achievement. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1965, p.339.

8. U.S. Department of Health, Education, and Welfare. Office of Education. Education for a Changing World of Work. OE Pub. No. 80020. Washington, D.C.: United States Government Printing Office, 1963.

9. Festinger, Leon, and Katz, Daniel. Research Methods in the Behavioral Sciences. New York: The Dryden Press. 1953, P. 411.

10. Grant, Marjorie A. The Development and Use of Evaluative Instruments for Occupational Programs in Child Care. Unpublished Master's Thesis, Cornell University. Ithaca, New York. 1966, p.32.

11. Guetzkow, Harold. "Unitizing and Categorizing Problems in Coding Qualitative Data." Journal of Clinical Psychology 6, 1950. p.47 - 58.

12. Guilford, J.P. Fundamental Statistics in Psychology and Education. New York: McGraw-Hill Book Company. 1965.

13. Havighurst, Robert J. Human Development and Education. New York: Longmans, Green. 1953, p. 2.

14. Hodge, Robert W.; Siegel, Paul M.; and Rossi, Peter H. Occupational Prestige in the United States, 1925-1963. Reprint: National Opinion Research Center. University of Chicago. 1964.

15. Hoyt, Cyril J., and Stunkard, Clayton L. "Estimation of Test Reliability for Unrestricted Item Scoring Methods." Educational and Psychological Measurement. 12, 1952.

16. Jacoby, Gertrude Parrott. Evaluation of a Secondary School Pilot Program in Preparation for Home Related Occupations. Unpublished Master's Thesis, Cornell University. Ithaca, New York. 1966.

17. Johnson, P.O. Statistical Methods in Research. New York: Prentice-Hall. 1949.

18. Kupsinel, Penelope. Instructional Materials for Vocational Food Service Courses at the Secondary Level. Unpublished doctoral dissertation. State University of Iowa. 1963.

19. Livers, David L. A Study of Relationships Between Selected Students Characteristics and Educational-Vocational Success of Students Attending Trade, Technical, and Business Schools. Unpublished doctoral dissertation. State University of Iowa. 1963.

20. Menninger, W.C. "introduction: The Meaning of Work in Western Society." In H. Borow (ed.), Man in a World at Work. Boston: Houghton-Mifflin. 1964. pp.XIII,XIV.

21. Menzel, Herbert. "A New Coefficient for Scalogram Analysis," Public Opinion Quarterly, Summer 1953. p. 268 - 280.

22. Ostler, Ruth Ellen. "Pilot and Experimental Studies -- A Basis for Program Development and Evaluation." Presentation Prepared for National Clinic on Home Economics Education. January, 1966.

23. Public Law 88 - 210, 88th Congress, N.R. 4955, Dec. 18, 1963, Section 10 (c) (11).

24. Ryans, David G., and Fredricksen, Norman. In Lindquist, E.F. (Ed.), Educational Measurement. Washington, D.C.: American Council on Education. 1951, Pp. 491, 490.

25. Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc. 1956.

26. Stanford Achievement Tests: High School Reading Test and High School Numerical Competence Test. New York: Harcourt, Brace & World, Inc. 1965.

27. Super, D.E. Career Development: Self Concept Theory. New York: College Entrance Examination Board. 1963.

28. Super, D.E. and Overstreet, Phoebe L. The Vocational Maturity of Ninth Grade Boys. New York: Teachers College, Columbia University, Bureau of Publications. 1960. Pp. 109, 62, 146

29. Thorndike, Robert L., and Hagen, Elizabeth. Measurement and Evaluation in Psychology and Education. New York: John Wiley & Sons, Inc. 1955.

30. University of the State of New York. Syllabus. The State Education Department. Bureau of Home Economics Education. Albany: Author. 1965.